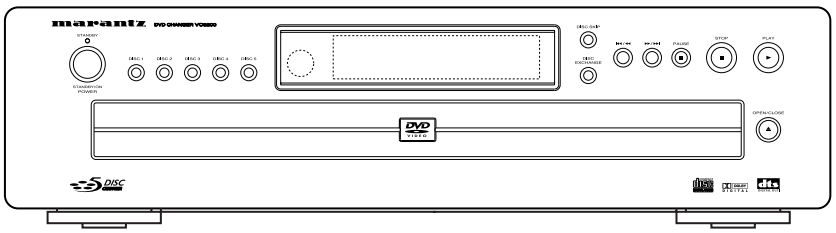
Service Manual

VC5200 /U1B

DVD Changer



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Please use this service manual with referring to the user guide (D.F.U) without fail.

VC5200

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VC5200

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2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

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3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

REMARK

This service manual corresponds to service modification code number "MZ01" and later. When exchanging MAIN PCB on the product of the service modification code "MZ00", it is necessary to also exchange the following parts on the I/O PCB simultaneously.
(The service modification code is mentioned in the number label on the rear panel. Ex.MZ01xxxxxxxxxx)

Two kinds of MPEG ICs (IC501) exist in this model. Since the conventional IC (Pantera-2) became a production stop, this was generated. Since power supply voltage is changed, new IC (Pantera-2 Plus) has change in a power supply part. In the case of repair, please fix after checking the version of IC.

	Service modification code	
	MZ00	MZ01
Location	<Pantera-2>	<Pantera-2 Plus>
D116	1N17	Tin Wire
D117	1N17	Tin Wire
C127	2200uF/6.3V	220uF/6.3V

1. TECHNICAL SPECIFICATIONS

DVD VIDEO PLAYER

Power supply		AC120 V, 60 Hz
Power consumtion		16 W
Mass		5.7 kg (12.6 lbs)
External dimensions		440 x 118 x 423 (W x H x D)
Signal system		NTSC
Laser	(DVD)	Semiconductor laser, wavelength 650 nm
	(CD)	780 nm
Frequency range (audio)		DVD : fs = 96 kHz 4 Hz - 44 kHz fs = 48 kHz 4 Hz - 22 kHz CD: 4 Hz - 20 kHz
Signal-to-noise ratio (audio)		More than 105dB (EIAJ)
Audio dynamic range (audio)		More than 100dB (EIAJ)
Harmonic distortion (audio)		0.003%
Wow and flutter		Below measurable level (less than +0.001%(W.PEAK)) (EIAJ)
Operations		Temperature : 5˚C(41˚F) to 35˚C(95˚F), Operation status : Horizontal

OUTPUTS

Video outputs	1.0V(p-p), 75Ω, negative sync., RCA jack x 1
S-video outputs	(Y)1.0V(p-p), 75Ω, negative sync., Mini DIN 4-pin x 1 (C)0.286V(p-p), 75Ω
Component video output	(Y)1.0V(p-p), 75Ω,negative sync., RCA jack x 1 (Cb)/(Cr) 0.7V(p-p), 75Ω
Audio output (Optical)	Optical Connector x 1
(Coaxial)	0.5V(p-p), 75Ω, RCA jack x 1
Audio output (analog audio)	2.0Vrms (1kHz, 0dB), 330Ω, RCA jack (L, R) x 2

*Designs and specifications are subject to change without notice.

2. PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY, NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

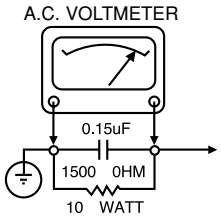
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED. A CHECK SHOULD BE MADE OF THE FOLLOWING.

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS, FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD), AND REPLACE IF NECESSARY. FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES, DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS. HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER; CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150.V A.C TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMP A.C ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



GOOD EARTH GROUND SUCH AS THE WATER PIPE. CONDUIT. ETC

PLACE THIS PROBE ON EACH EXPOSED METAL PART

SUBJECT: GRAPHIC SYMBOLS

THE LIGHTNING FLASH WITH APROWHEAD SYMBOL. WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.

THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

SUBJECT : X-RADIATION

1. BE SURE PROCEDURES AND INSTRUCTIONS TO ALL SERVICE PERSONNEL COVER THE SUBJECT OF X-RADIATION. THE ONLY POTENTIAL SOURCE OF X-RAYS IN CURRENT T.V. RECEIVERS IS THE PICTURE TUBE. HOWEVER, THIS TUBE DOES NOT EMIT X-RAYS WHEN THE HIGH VOLTAGE IS AT THE FACTORY SPECIFIED LEVEL. THE PROPER VALUE IS GIVEN IN THE APPLICABLE SCHEMATIC. OPERATION AT HIGHER VOLTAGES MAY CAUSE A FAILURE OF THE PICTURE TUBE OR HIGH VOLTAGE SUPPLY AND, UNDER CERTAIN CIRCUMSTANCES, MAY PRODUCE RADIATION IN EXCESS OF DESIRABLE LEVELS.
2. ONLY FACTORY SPECIFIED C.R.T. ANODE CONNECTORS MUST BE USED. DEGAUSSING SHIELDS ALSO SERVE AS AN X-RAY SHIELD IN COLOR SETS, ALWAYS RE-INSTALL THEM.
3. IT IS ESSNTIAL THAT SERVICE PERSONNEL HAVE AVAILABLE AN ACCURATE AND RELIABLE HIGH VOLTAGE METER. THE CALIBRATION OF THE METER SHOULD BE CHECKED PERIODICALLY AGAINST A REFERENCE STANDARD, SUCH AS THE ONE AVAILABLE AT YOUR DISTRIBUTOR.
4. WHEN THE HIGH VOLTAGE CIRCUITRY IS OPERATING PROPERLY THERE IS NO POSSIBILITY OF AN X-RADIATION PROBLEM. EVERY TIME A COLOR CHASSIS IS SERVICED. THE BRIGHTNESS SHOULD BE RUN UP AND DOWN WHILE MONITORING THE HIGH VOLTAGE WITH A METER TO BE CERTAIN THAT THE HIGH VOLTAGE DOES NOT EXCEED THE SPECIFIED VALUE AND THAT IT IS REGULATING CORRECTLY. WE SUGGEST THAT YOU AND YOUR SERVICE ORGANIZATION REVIEW TEST PROCEDURES SO THAT VOLTAGE REGULATION IS ALWAYS CHECKED AS A STANDARD SERVICING PROCEDURE AND THAT THE HIGH VOLTAGE READING BE RECORDED ON EACH CUSTOMER'S INVOICE.
5. WHEN TROUBLESHOOTING AND MAKING TEST MEASUREMENTS IN A PRODUCT WITH A PROBLEM OF EXCESSIVE HIGH VOLTAGE, AVOID BEING UNNECESSARILY CLOSE TO THE PICTURE TUBE AND THE HIGH VOLTAGE SUPPLY. DO NOT OPERATE THE PRODUCT LONGER THAN IT IS NECESSARY TO LOCATE THE CAUSE OF EXCESSIVE VOLTAGE.
6. REFER TO HV. B+ AND SHUTDOWN ADJUSTMENT PROCEDURES DESCRIBED IN THE APPROPRIATE SCHEMATIC AND DIAGRAMS (WHERE USED).

SUBJECT: IMPLOSION

1. ALL DIRECT VIEWED PICTURE TUBES ARE EQUIPPED WITH AN INTEGRAL IMPLOSION PROTECTION SYSTEM, BUT CARE SHOULD BE TAKEN TO AVOID DAMAGE DURING INSTALLATION, AVOID SCRATCHING THE TUBE. IF SCRATCHED REPLACE IT.
2. USE ONLY RECOMMENDED FACTORY REPLACEMENT TUBES.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBYHOLE OR CLOSELY FITTING SHELF SPACE, OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT, MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS. A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM. BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERICALLY APPROVED FOR USE WITH T.V.'S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS. EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

3. SERVICING PRECAUTIONS

CAUTION : Before servicing the DVD covered by this service data and its supplements and ADDENDUMS, read and follow the *SAFETY PRECAUTIONS. NOTE* : if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publications, always follow the safety precautions.
Remember Safety First:

General Servicing Precautions

1. Always unplug the DVD AC power cord from the AC power source before:
   (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
   (2) Disconnection or reconnecting any internal electrical plug or other electrical connection.
   (3) Connecting a test substitute in parallel with an electrolytic capacitor.
   Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this DVD or any of its assemblies.

3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator.
   Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket B+ voltage interlocks with whitch instruments covered by this service manual might be equipped.

5. Do not apply AC power to this DVD and/or any of its electrical assemblies unless all solid-state device heat sinks are cerrectly installed.

6. Always connect test instrument ground lead to the appropriate ground before connection the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.
Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.
The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a GROUNDED-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static solder removal device. Some solder removal devices not classified a “anti-static” can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protec tive package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

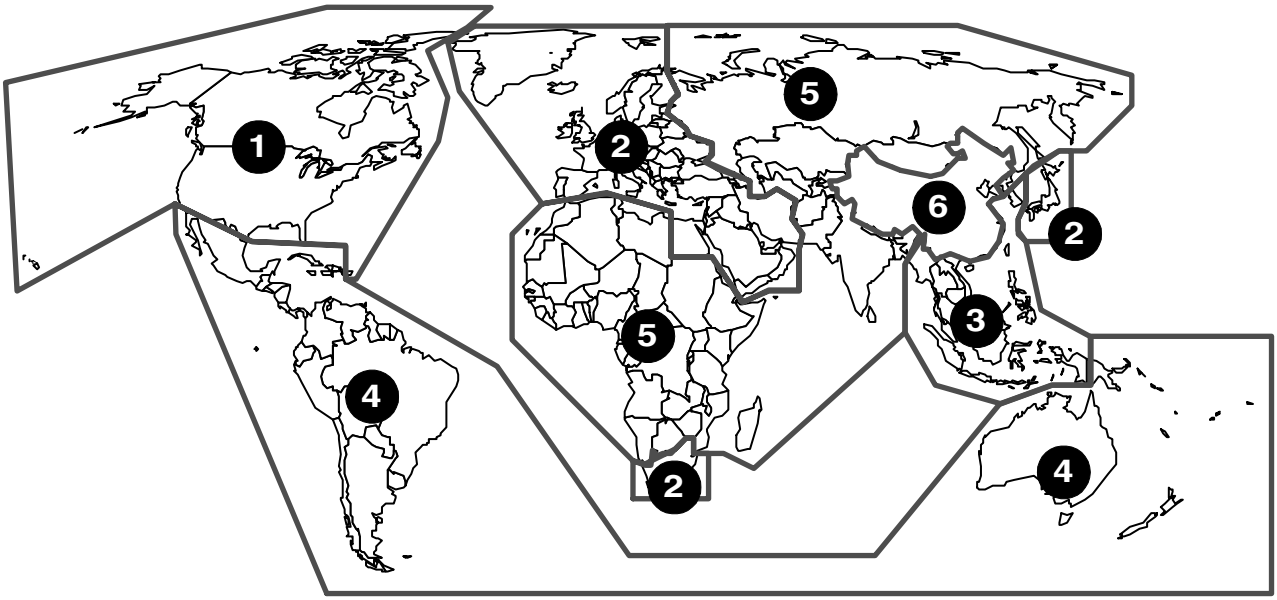
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

4. REGIONAL CODES

What are "regional codes"?

Motion picture studios want to control the home release of movies in different countries because theater releases arenít simultaneous (a movie may come out on DVD in the US when itís just hitting screens in Europe). Therefore they have required that the DVD standard include codes which can be used to lock out the playback of certain discs in certain geographical regions. Players sold in each region will have that regionís code built into the player. The player will refuse to play these "region coded" discs which are not allowed in the region. However, regional codes are entirely optional. Discs without codes will play on any player in any country. Some studios have already announced that only their new releases will have regional codes. There are six regions:

1. United States and Canada
2. Europe and Japan
3. Far East (except Japan & China)
4. South America and Oceania
5. Africa and the Middle East
6. China (except Hong Kong)



Map of DVD Regions

5. INFORMATIONS

REGION CODE

VERSION	REGION CODE	COUNTRY
/UXX	1	USA/CANADA

THE DISCS THAT THE VC5200 CAN HANDLE

The following discs can be played back with a VC5200.

disc	mark	playback capability	size	side
DVD	DVD VIDEO	Audio/Video	12 cm 8 cm	single/double
VCD	COMPACT disc DIGITAL VIDEO	Video	12 cm 8 cm	single
CD	COMPACT disc DIGITAL AUDIO	Audio	12 cm 8 cm	single

Note: The regional code of the discs must meet to the regional code of the VC5200.

DVD INFORMATION

Below is a glossary of the new terms related to DVD.

Title:

A disc may have more than one story/movie on it, so each story/movie is called a “title”.
For example, if there are 2 movies on the disc, they are separated into Title 1 and Title 2.

Chapter:

A title may also be separated into chapters.
For example, a movie (title) may be separated into 3 scenes (chapters).

Title 1			Title 2		
Chapter 1	Chapter 2	Chapter 3	Chapter 1	Chapter 2	Chapter 3

Subtitles:

DVDs are recorded with up to 32 different subtitle languages. If a disc has more than one subtitle language, you can select the subtitle language that you want to read.

Soundtrack language:

DVDs are recorded with up to 8 different soundtrack languages. If a disc has more than one language, you can select the soundtrack language that you want to listen to.

Multi-angles:

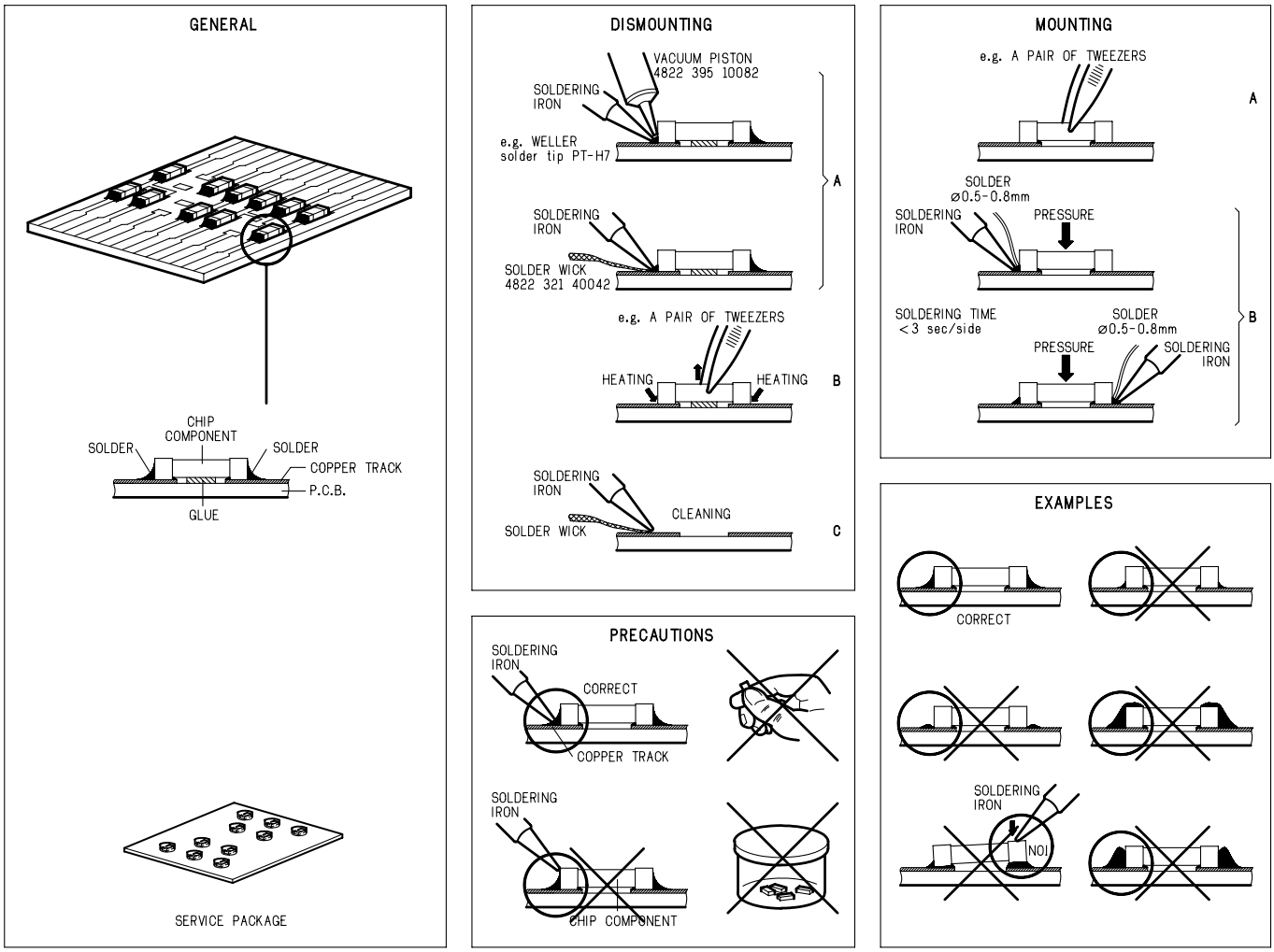
On some DVDs, scenes have been filmed from different angles (up to a maximum of 9). On these discs, you can select the angle that you want to watch. Please refer to the DVD’s manual to see which scenes have multi-angles.

Parental guide:

Some discs have restriction levels that allow you to cut scenes or prevent playback of discs that have contents that you do not want children to watch.

6. SERVICING HINT

SERVICE HINTS

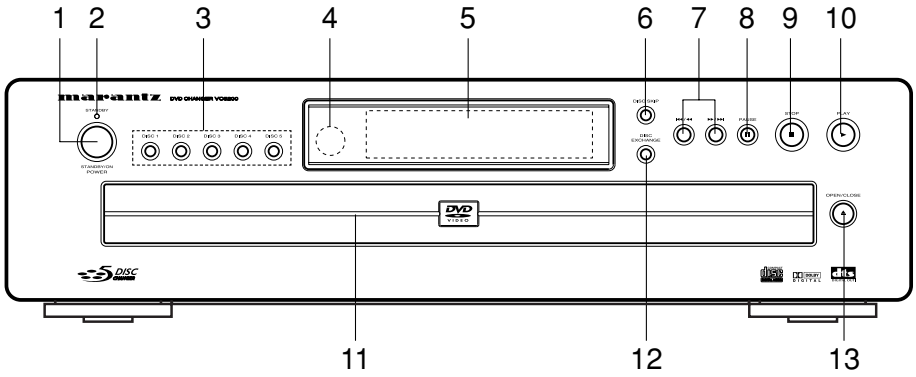


SERVICE TOOLS

Audio signals disc	4822 397 30184
Disc without errors (SBC444)+	
Disc with DO errors, black spots and fingerprints (SBC444A)	4822 397 30245
Disc (65 min 1kHz) without no pause	4822 397 30155
Max. diameter disc (58.0 mm)	4822 397 60141
Torx screwdrivers	
Set (straight)	4822 395 50145
Set (square)	4822 395 50132
13th order filter	4822 395 30204
DVD test disc	4822 397 10131

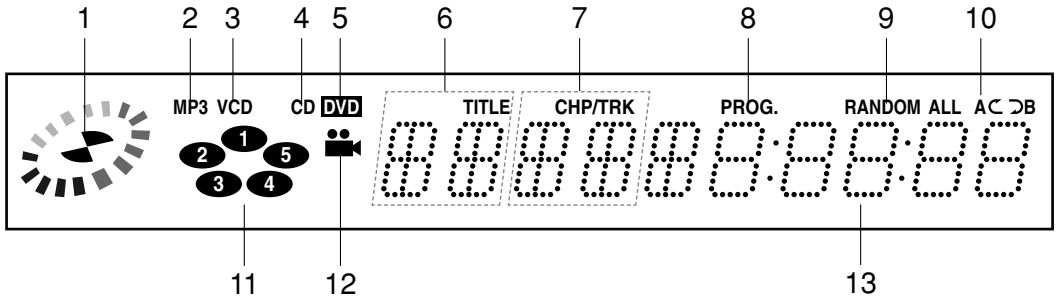
7. LOCATION OF CUSTOMER CONTROLS

FRONT



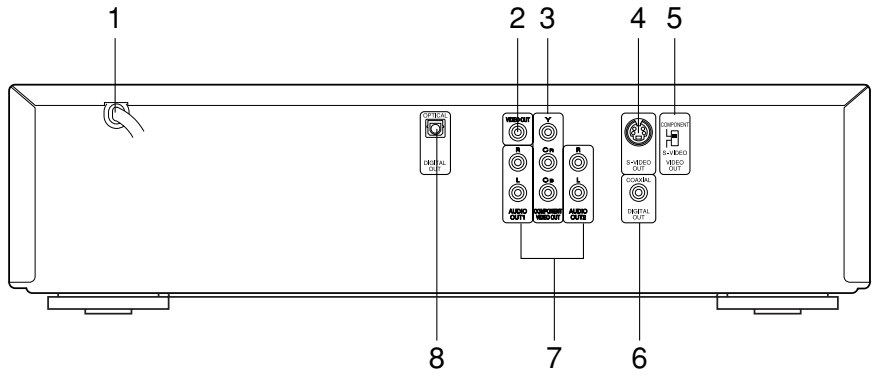
1. POWER BUTTON
2. POWER INDICATOR
3. DISC SELECT(1~5) BUTTONS
4. REMOTE SENSOR
5. DISPLAY WINDOW
6. DISC SKIP BUTTON
7. SKIP/SCAN BUTTONS
8. PAUSE BUTTON
9. STOP BUTTON
10. PLAY BUTTON
11. DISC TRAY
12. DISC EXCHANGE BUTTON
13. OPEN/CLOSE BUTTON

INDICATOR PANEL

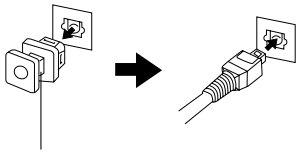


1. OPERATING STATUS INDICATOR
2. MP3 INDICATOR
3. VIDEO CD INDICATOR
4. CD INDICATOR
5. DVD INDICATOR
6. TITLE NUMBER INDICATOR
7. CHAPTER/TRACK NUMBER INDICATOR
8. PROGRAM INDICATOR
9. RANDOM INDICATOR
10. REPEAT PLAYBACK MODE INDICATORS
11. DISC 1-5 INDICATORS
12. ANGLE ICON INDICATOR
13. TOTAL PLAYING TIME/ ELAPSED TIME INDICATORS

REAR



1. POWER CORD
2. VIDEO OUT JACK
3. COMPONENT VIDEO OUT/PROGRESSIVE SCAN JACKS
4. S-VIDEO OUT JACK
5. VIDEO OUTPUT SELECT SWITCH
6. COAXIAL DIGITAL AUDIO OUT JACK
7. AUDIO OUT (L/R) 1, 2 JACKS
8. OPTICAL DIGITAL AUDIO OUT JACK
   REMOVE THE DUST PROTECTION CAP FROM THE CONNECTOR AND CONNECT THE OPTICAL DIGITAL CABLE (NOT SUPPLIED) FIRMLY SO THAT THE CONFIGURATIONS OF BOTH THE CABLE AND THE CONNECTOR MATCH. KEEP THE DUST PROTECTION CAP AND ALWAYS REATTACH THE CAP WHEN NOT USING THE CONNECTOR TO PROTECT AGAINST DUST INTRUSION.

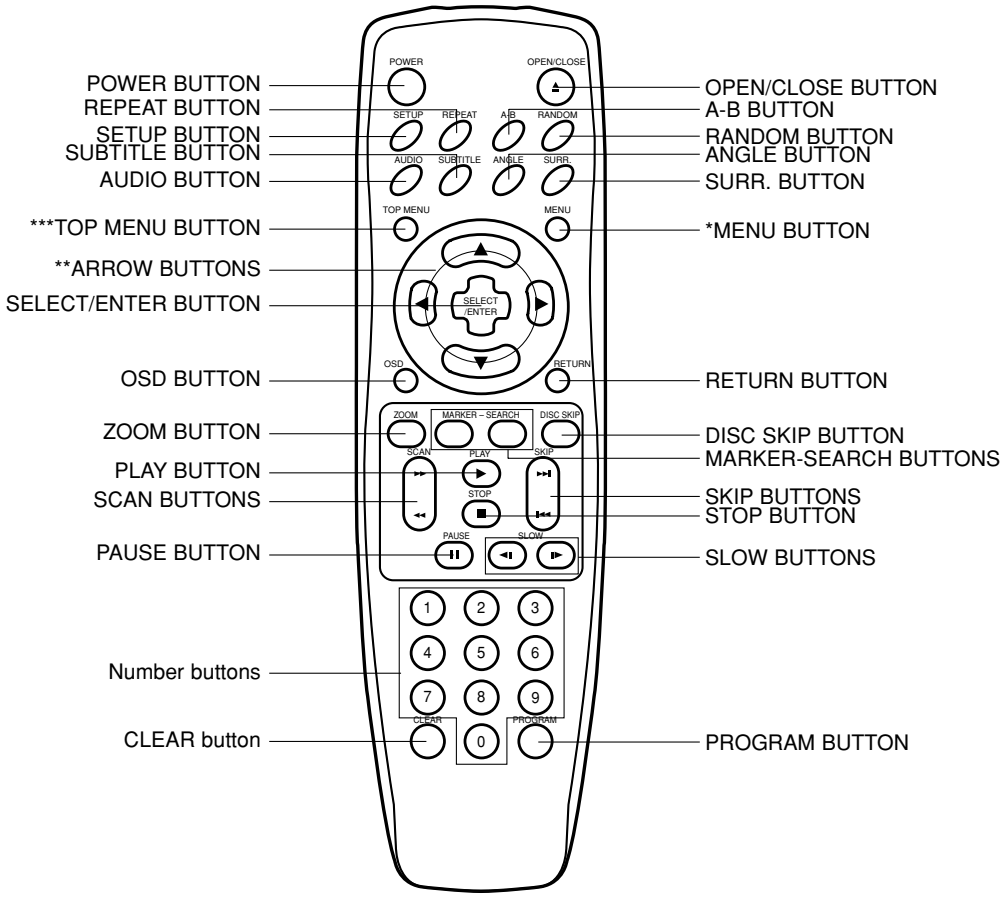


- This DVD player support two remote control codes: C1 and C2.
- When the unit is shipped from the factory, the remote code is set to C1.
- To change the remote control codes press and hold and hold CLEAR button for at least five seconds.
- Changed remote control codes is displayed in the display window.
- Set the remote control codes of the remote control to the same setting.

Notes

- This setting can not be used if a disc is playing.
- If a DVD has been loaded, be sure to press STOP twice before proceeding.

REMOTE CONTROL



***MENU BUTTON**

USE THE MENU BUTTON TO DISPLAY THE MENU SCREEN INCLUDED ON SELECTED DVD VIDEO DISCS. TO OPERATE A MENU SCREEN, FOLLOW THE INSTRUCTIONS IN “USING A DVD MENU” .

****DIRECTIONAL ARROW BUTTONS**

(UP, DOWN, LEFT, RIGHT) FOR USE IN HIGHLIGHTING A SELECTION ON A GUI MENU SCREEN, TITLE AND MENU SCREEN.

*****TOP MENU BUTTON**

USE THE TOP MENU BUTTON TO DISPLAY THE TITLE MENU INCLUDED ON SELECTED DVD VIDEO DISCS. TO OPERATE A MENU SCREEN, FOLLOW THE INSTRUCTIONS IN “USING A TITLE MENU” .

- This remote control supports two remote control codes: C1 and C2.
- When the unit is shipped from the factory the remote control is set to C1.
- To set the remote control to C2, hold down both the STOP button and "2" number button on the remote control for at least five seconds. (If the batteries in the remote control are replaced while the remote control is set to C2, the setting will revert C1.)
- To set the remote control back to C1, hold down both the STOP button and "1" number button on the remote control for at least five seconds.
- Also set the remote control codes of the player to the same setting as the remote control. (This setting is set to C1, when the unit is shipped from the factory)

8. DISASSEMBLY

CAUTION BEFORE STARTING SERVICING

Electronic parts are susceptible to static electricity and may easily damaged, so do not forget to take a proper grounding treatment as required.

Many screws are used inside the unit. To prevent missing, dropping, etc. of the screws, always use a magnetized screw driver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded patrs and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

CABINET DISASSEMBLY

1. Top Case

1. Release 7 screws (A). (See Fig. 2-1)
2. Lift the top case with holding the back of it, and remove it in the direction of the arrow.

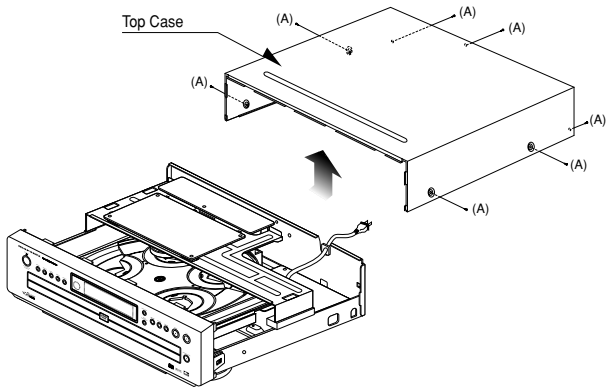


Fig. 2-1

2. Tray Door

1. Eject the disc tray.
2. Lift up the tray door in the direction of the arrow.

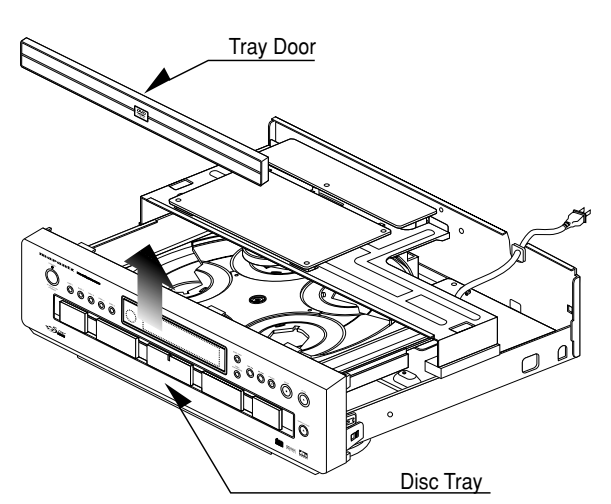


Fig. 2-2

3. Front Panel

1. Eject the disc tray. (See Fig. 2-2)
2. Remove the tray door. (See Fig. 2-2)
3. Pull the front panel toward you while pressing 5 stoppers to disengage, and remove the front panel. (See Fig. 2-3)

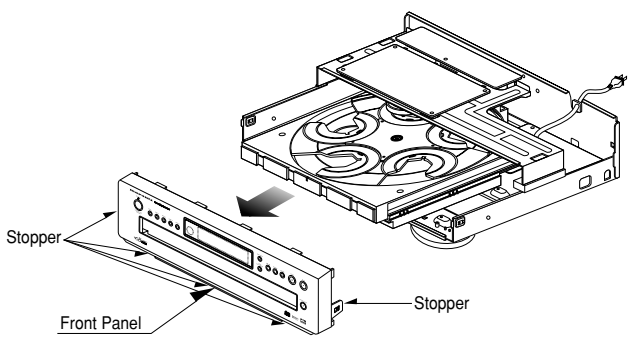


Fig. 2-3

REMARK

Press OPEN/CLOSE button to open the tray.
If the tray does not work, please refer page 14.
(3. Taking out the disc)

CIRCUIT BOARD DISASSEMBLY

Note: Before removing the main circuit board, be sure to shortcircuit the laserdiode output land. After replacing the main circuit board, open the land after inserting the flexible connector. (Refer to Mechanism Disassembly)

1. Disassemble Main circuit board, Jack circuit board, Power circuit board and MD Ass'y DPM1.

1. Remove the top case.(See Fig. 2-1)
2. Remove 10 screws (B).
3. Disassemble Main circuit board and Jack circuit board from Bracket Main.
4. Unscrew 3 screws(C) at Bracket Main.
5. Disassemble Bracket Main from Main chassis.
6. Unscrew 4 screws(D) at MD Ass'y DPM1.
7. Turn the portion the direction of arrow to move the Base Assembly Tray in front of you.
8. Release the other 3 screws(E).
9. Disassemble MD Ass'y DPM1 from Main chassis.
10. Unscrew 4 screws(F) at Power circuit.
11. Disassemble power circuit board from Main chassis.

2. Digitron and Key Circuit Board

1. Remove the front panel.(See Fig. 2-3)
2. Release 5 screws (G), and remove the digitron circuit board.

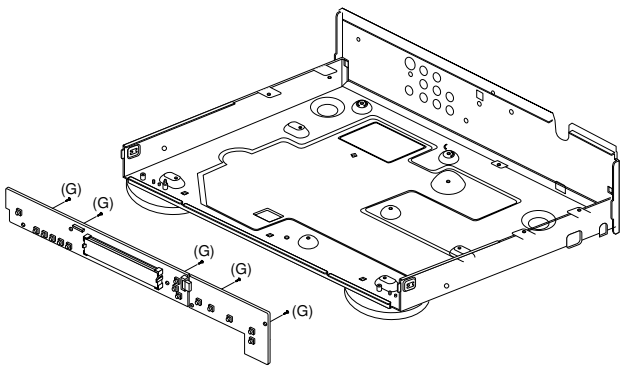


Fig. 2-5

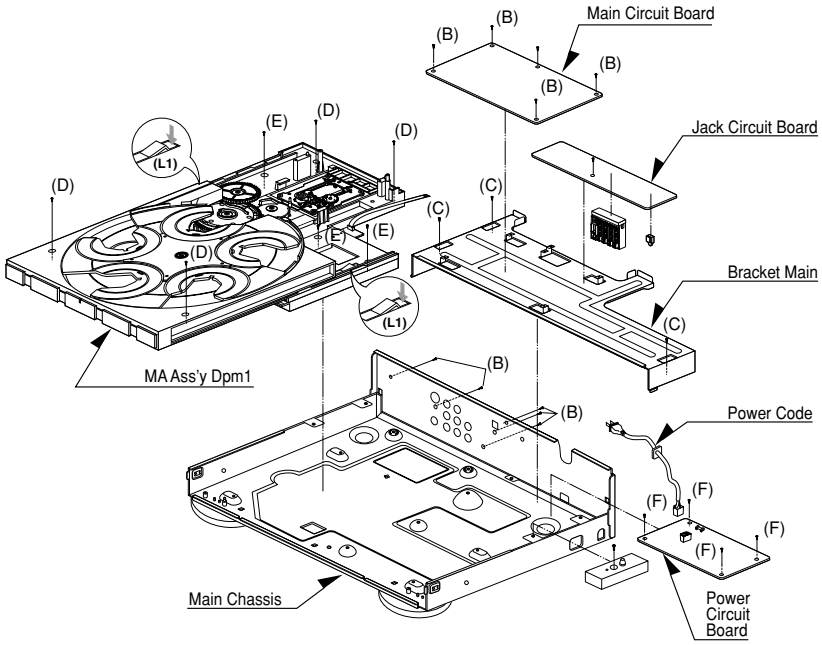
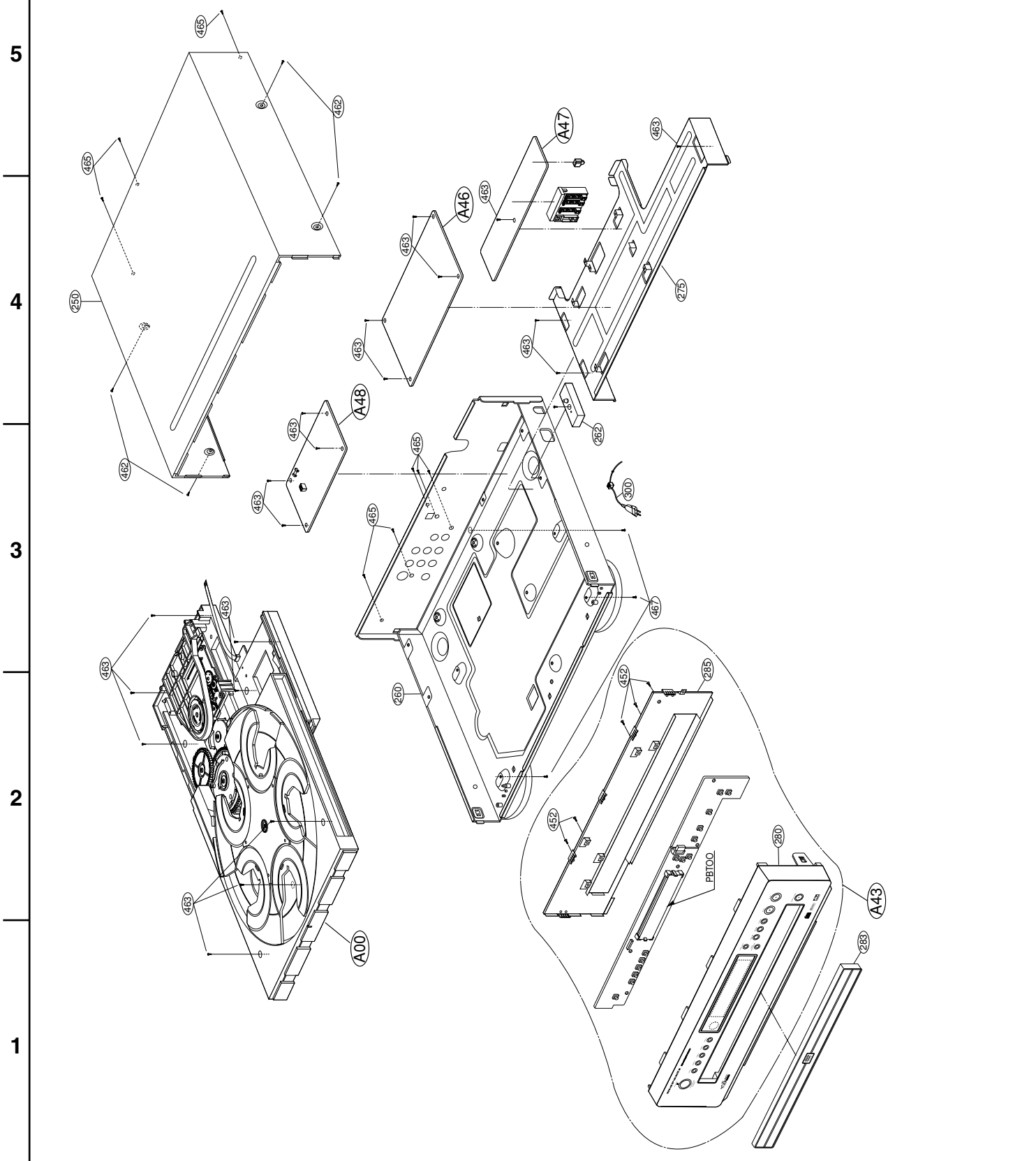


Fig. 2-4

9. EXPLODED VIEWS

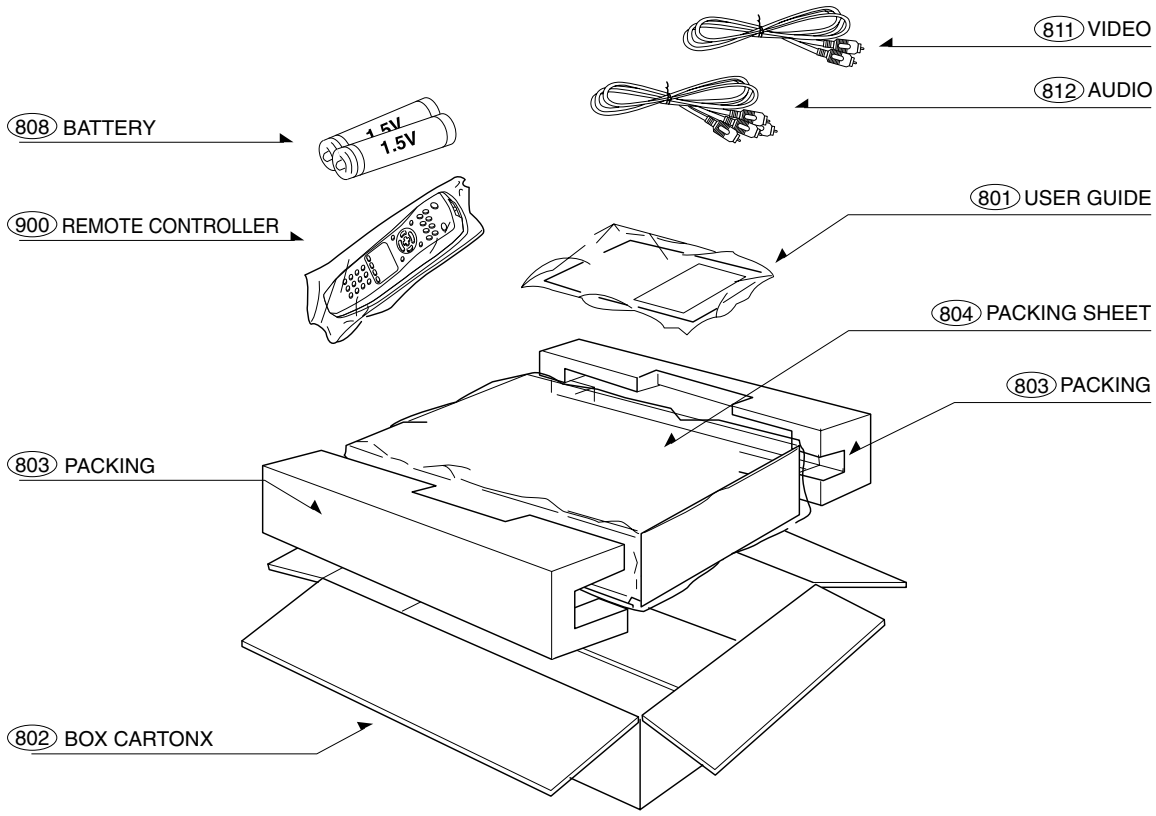
1. Cabinet and Main Frame Section



POS. NO.	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
A00		6721R-0314C	DECK ASSY DPM1	nsp
A43		3501R-4508A	BOARD ASSY FRONT	nsp
A46		6871R-4407G	PCB ASSY MAIN RCA BAS	*ZZ001890R
A47		6871R-4408B	PCB ASSY I/O	nsp
A48		3501R-3073G	BOARD ASSY 5 CHANGER NARROW PLUS	nsp
250		3110R-0194G	TOP COVER	nsp
260		3141R-0037N	CHASSIS ASSY MAIN	nsp
262			RETAINER	nsp
275		4811R-0027D	BRACKET ASSY MAIN	nsp
280		3721R-F221A	PANEL ASSY FRONT	346W248500
283		3581R-T037A	DOOR ASSY TRAY	346W063510
285		3301R-M013A	PLATE ASSY SHIELD	nsp
300		6410RAHS02A	MAINS CORD	*YC000450R
452		353-051A	SCREW SPECIAL	nsp
462		353-085E	SCREW DRAWING	nsp
463		353-051G	SCREW DRAWING	nsp
465		353-046K	SCREW SPECIAL (3X10 BK)	nsp
467		353-046N	SCREW SPECIAL (3X8 BK)	nsp

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

2.Packing Accessory Section

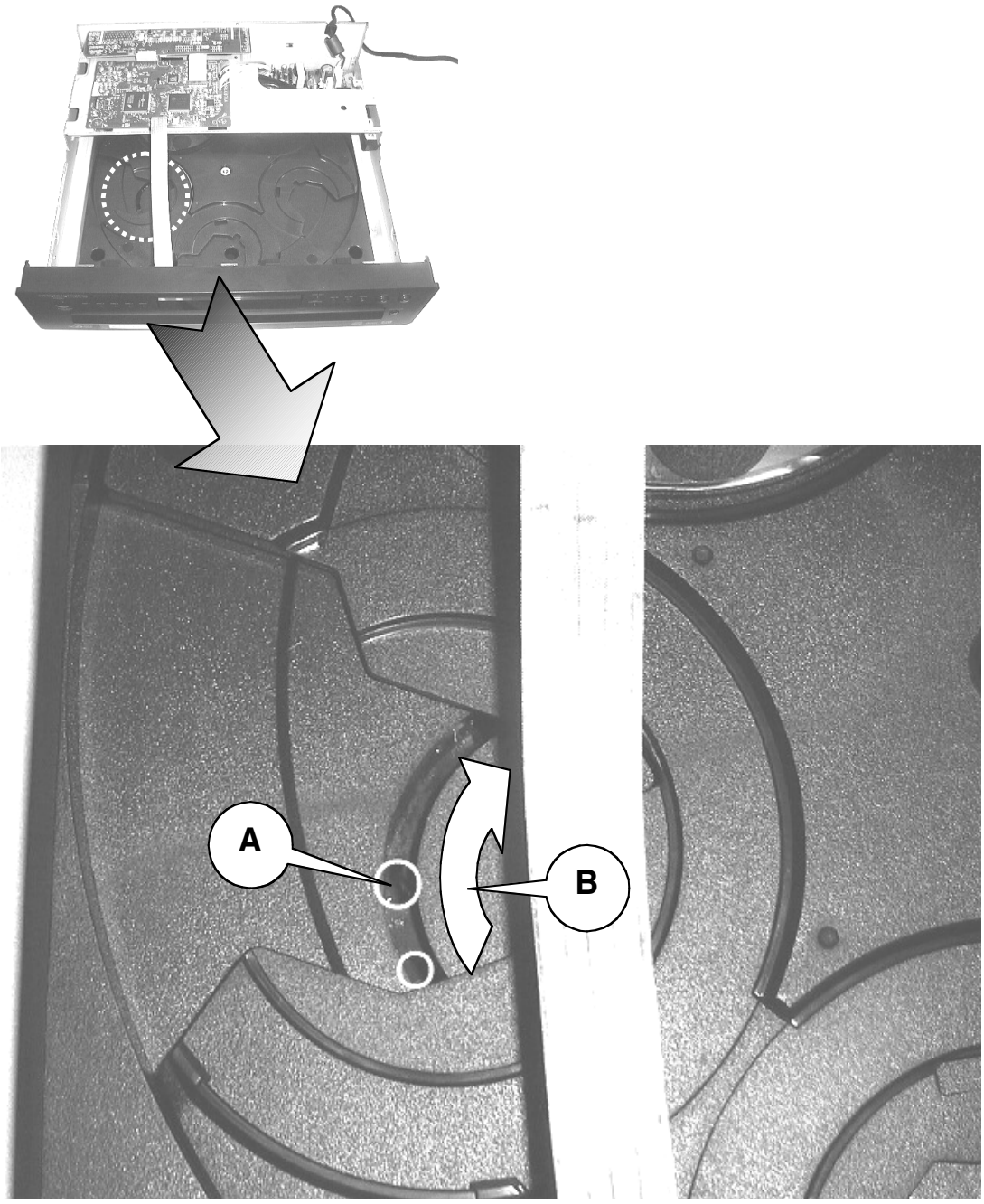


POS. NO.	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
801		3835RS0021C	USER GUIDE	346W851250
802		3890R-H500F	BOX	nsp
803		3920R-E018A	PACKING	nsp
804		3858R-S001B	PACKING SHEET	nsp
808		534-008C	BATTERY AAAM(R03) 1PAIR	nsp
811		564-017B	VIDEO CORD 1WAY (YL)	nsp
812		564-018B	AUDIO CORD 2WAY (RD/WH)	nsp
900		6711R2N060B	REMOTE CONTROLLER RC5200VC	ZK346W0010

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

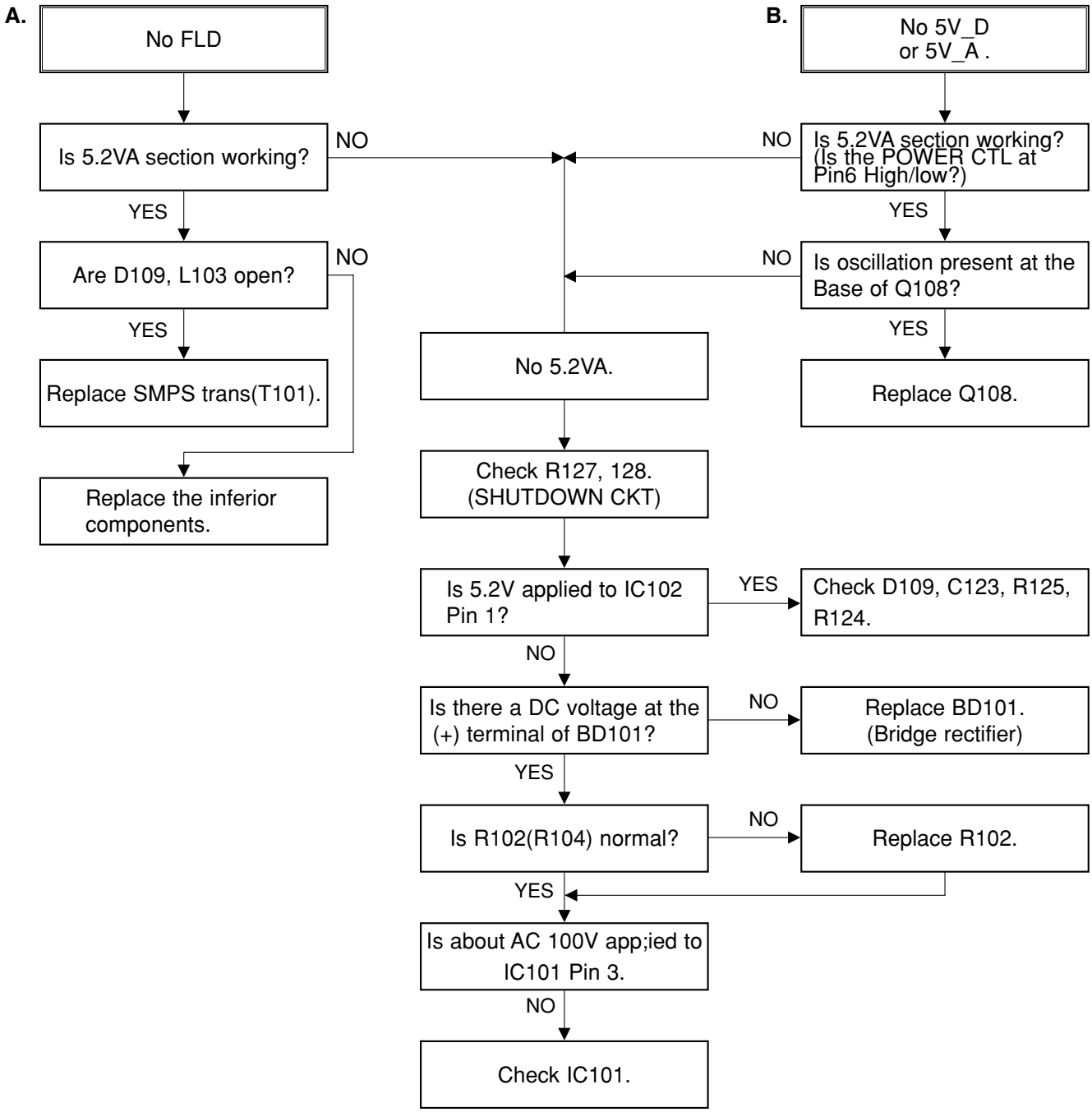
3. Taking out the disc

1. Release 7 screws.
2. Lift the top case with holding the back of it and remove backward.
3. Turn the (A) portion to the direction of arrow (B).
4. Then the tray is moved a little. Pull the tray with your hand at this time.



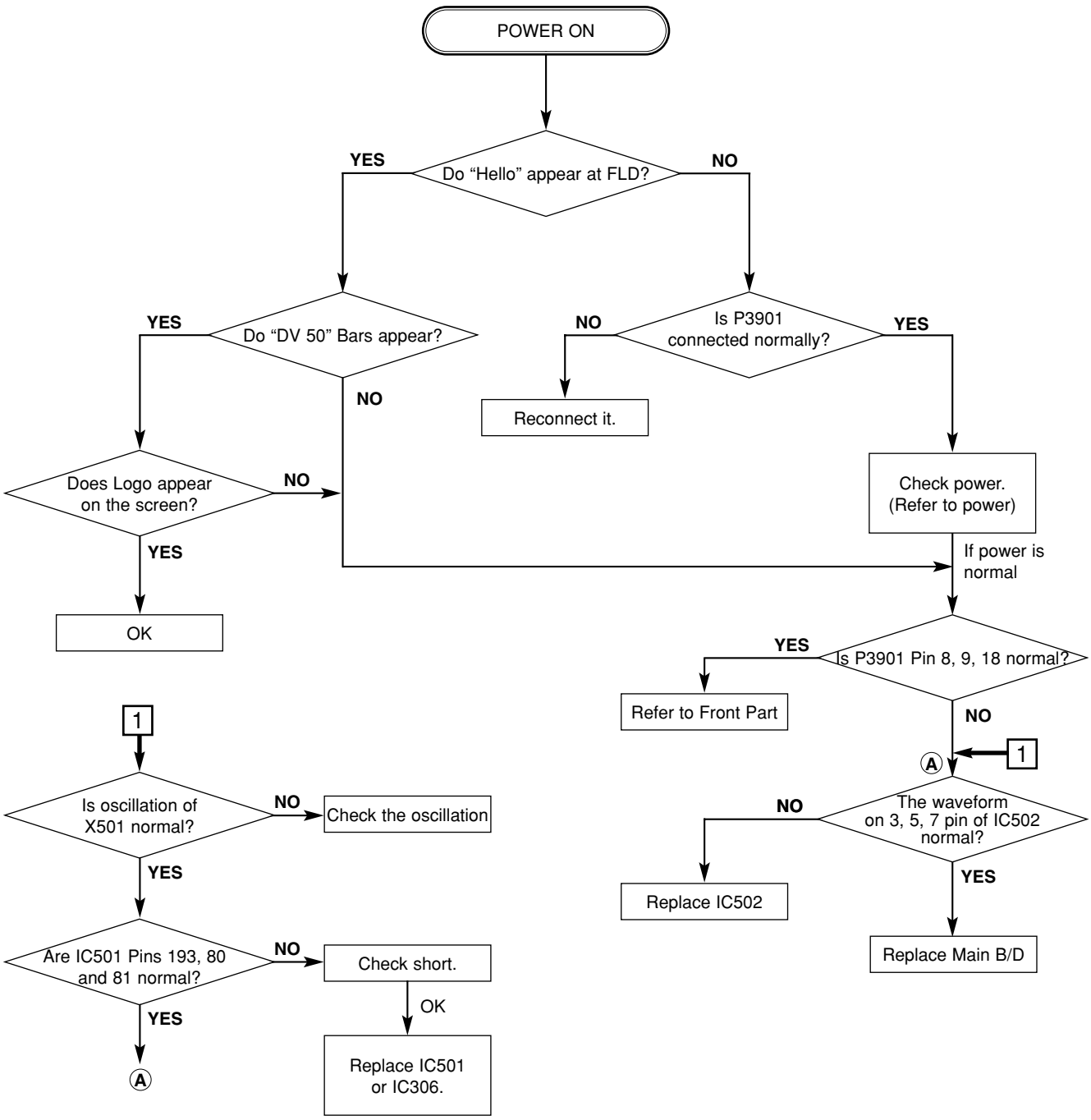
10. ELECTRICAL TROUBLESHOOTING GUIDE

1. Power(SMPS) Circuit

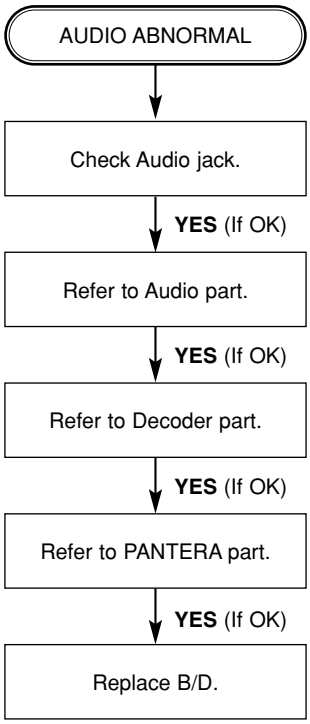


2. μ-COM Circuit

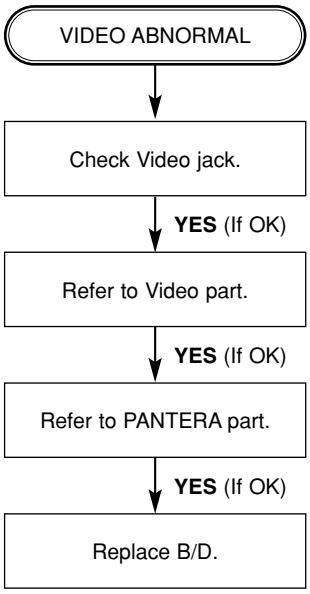
A. No Power



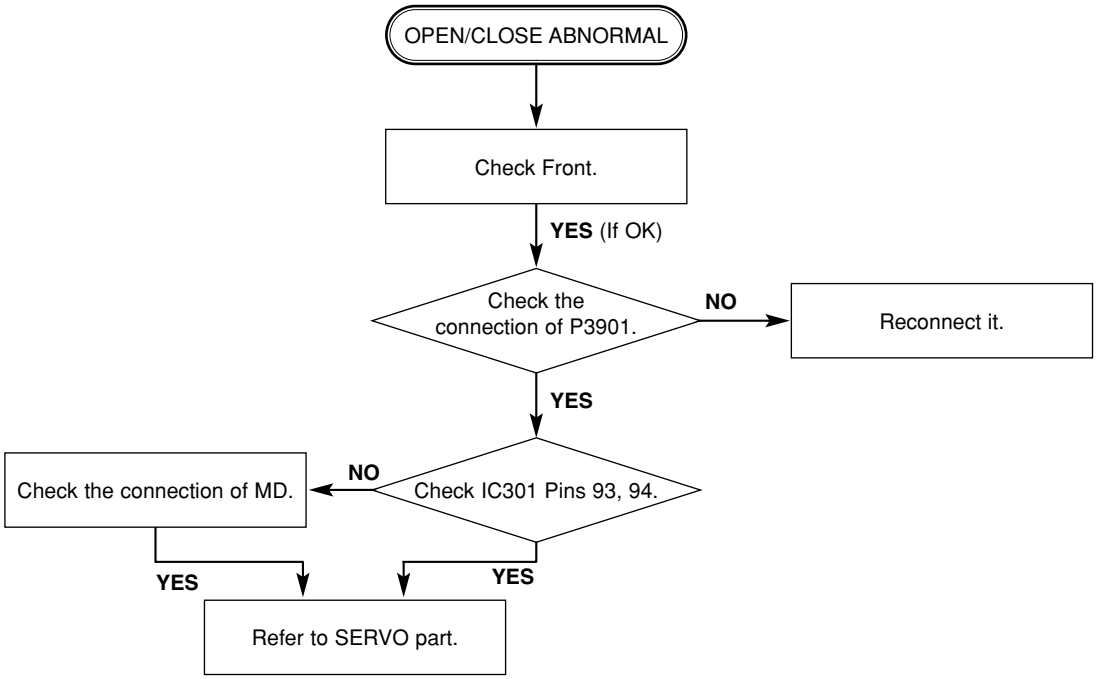
B. Audio abnormal



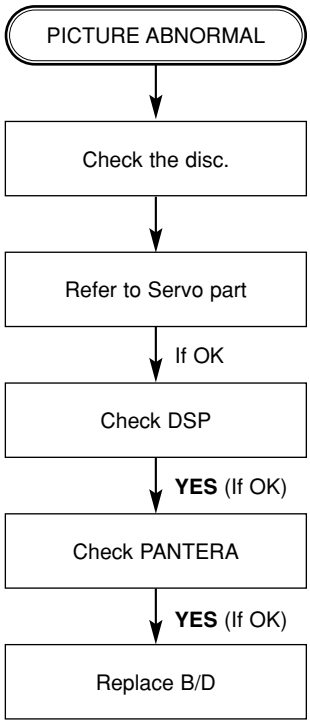
C. Video abnormal



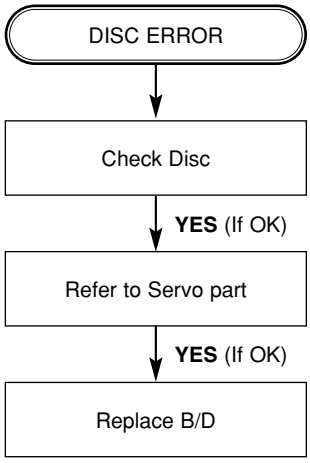
D. Open/Close abnormal



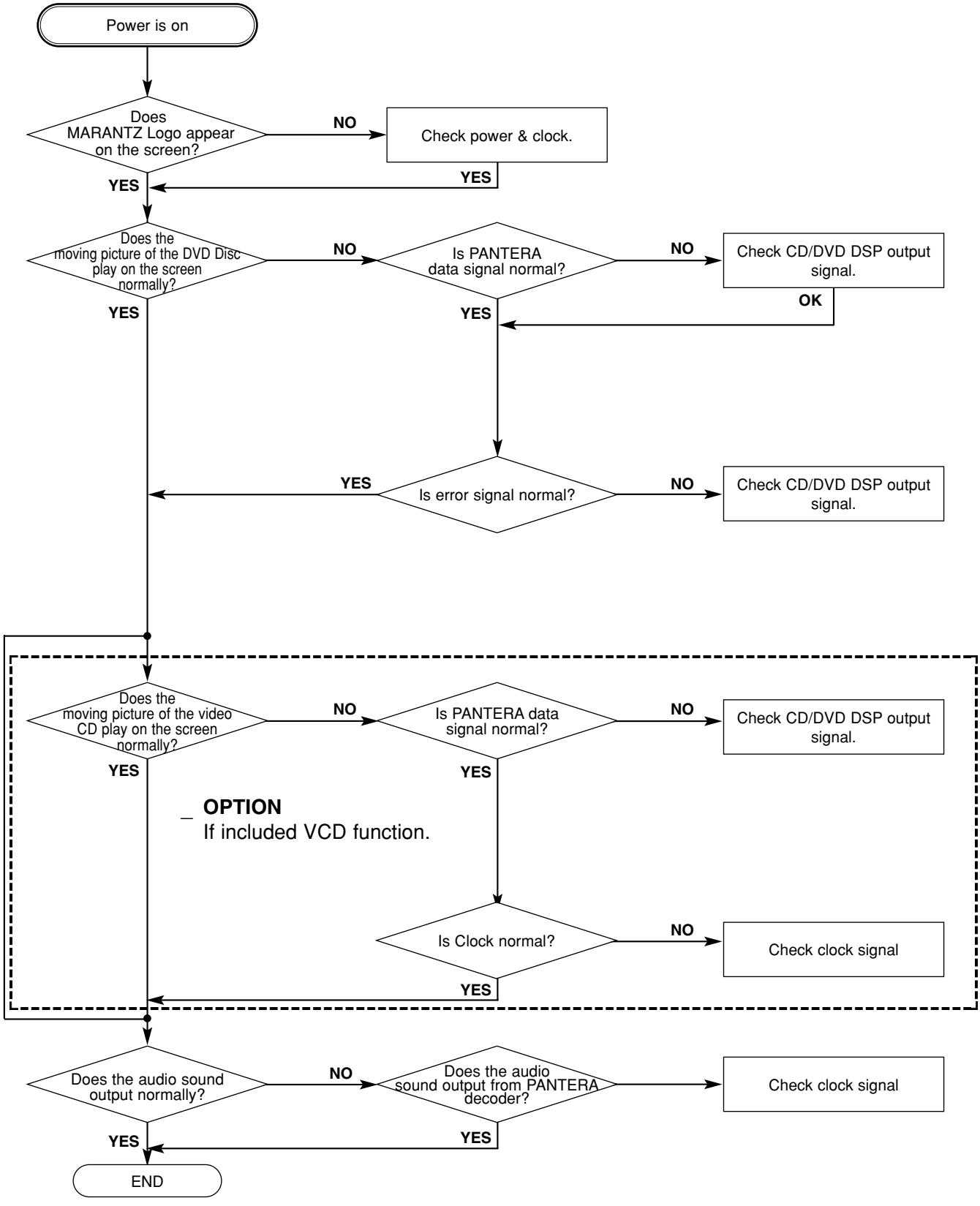
E. Picture abnormal



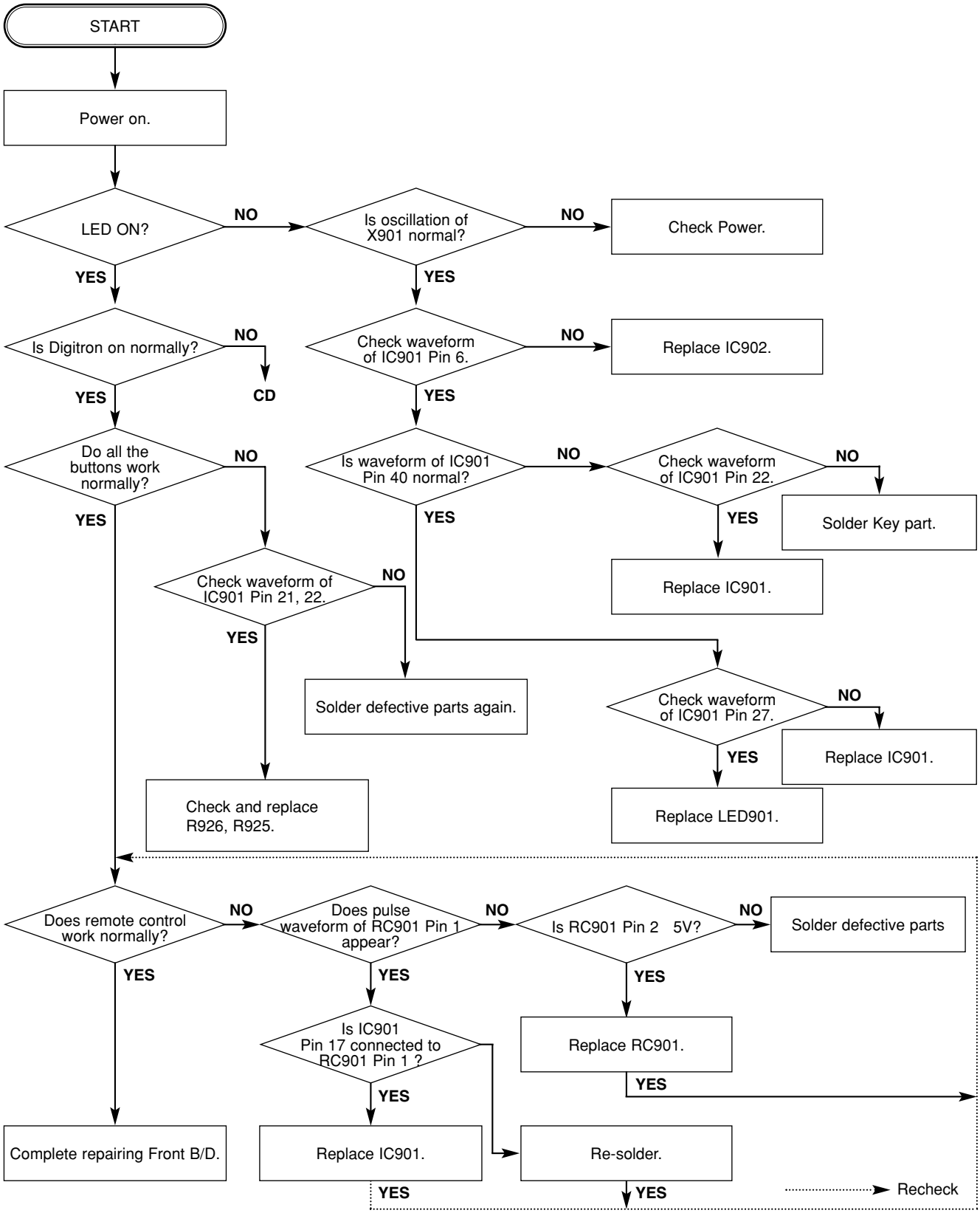
F. Disc Error



3. PANTERA Circuit

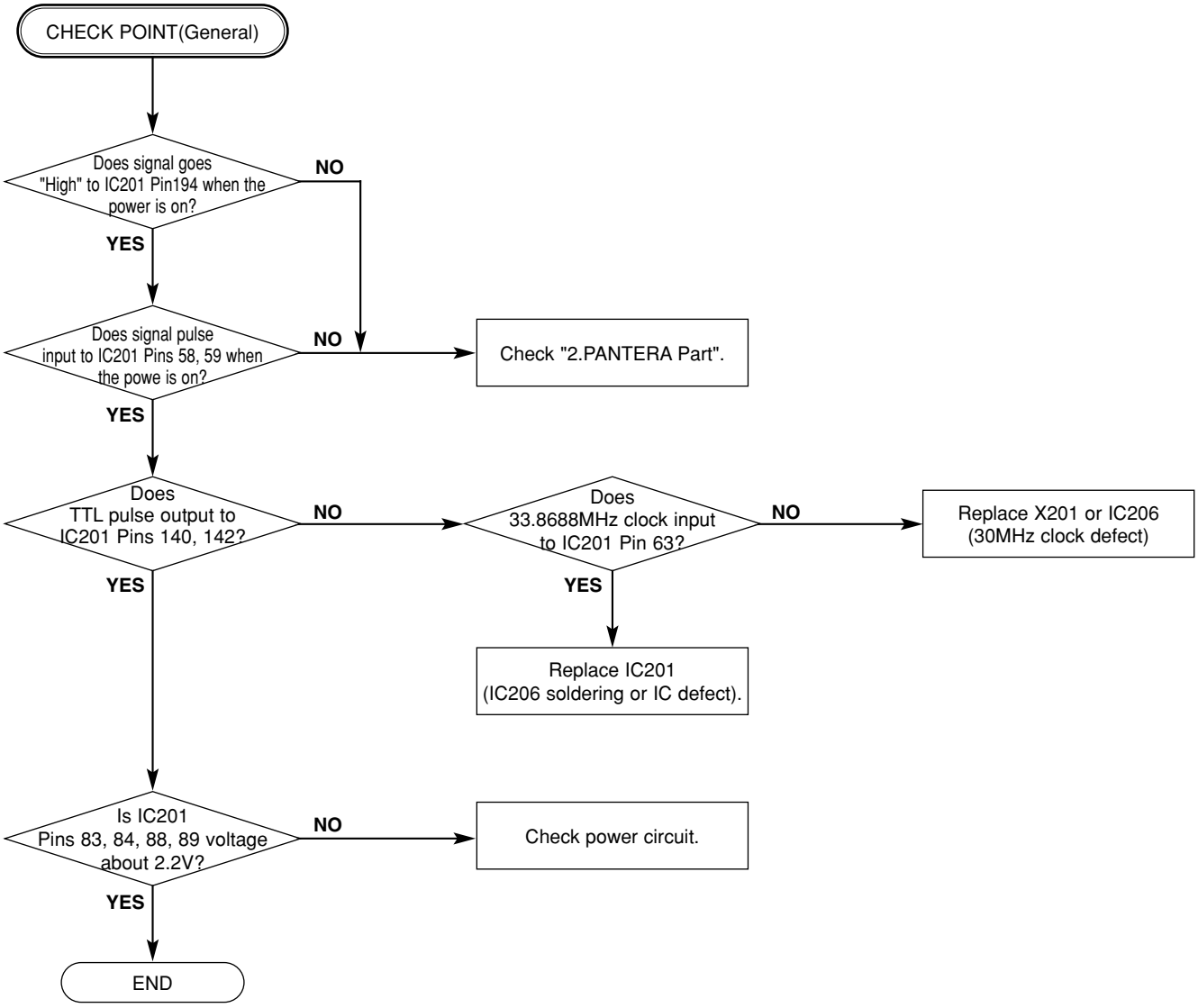


4. Front Circuit (Digitron & key)



5. RF/Servo Circuit

A.


CHECK POINT(General)
Does signal goes "High" to IC201 Pin194 when the power is on?
NO
YES
Does signal pulse input to IC201 Pins 58, 59 when the powe is on?
NO
Check "2.PANTERA Part".
YES
Does TTL pulse output to IC201 Pins 140, 142?
NO
Does 33.8688MHz clock input to IC201 Pin 63?
NO
Replace X201 or IC206 (30MHz clock defect)
YES
YES
Replace IC201 (IC206 soldering or IC defect).
Is IC201 Pins 83, 84, 88, 89 voltage about 2.2V?
NO
Check power circuit.
YES
END

B.

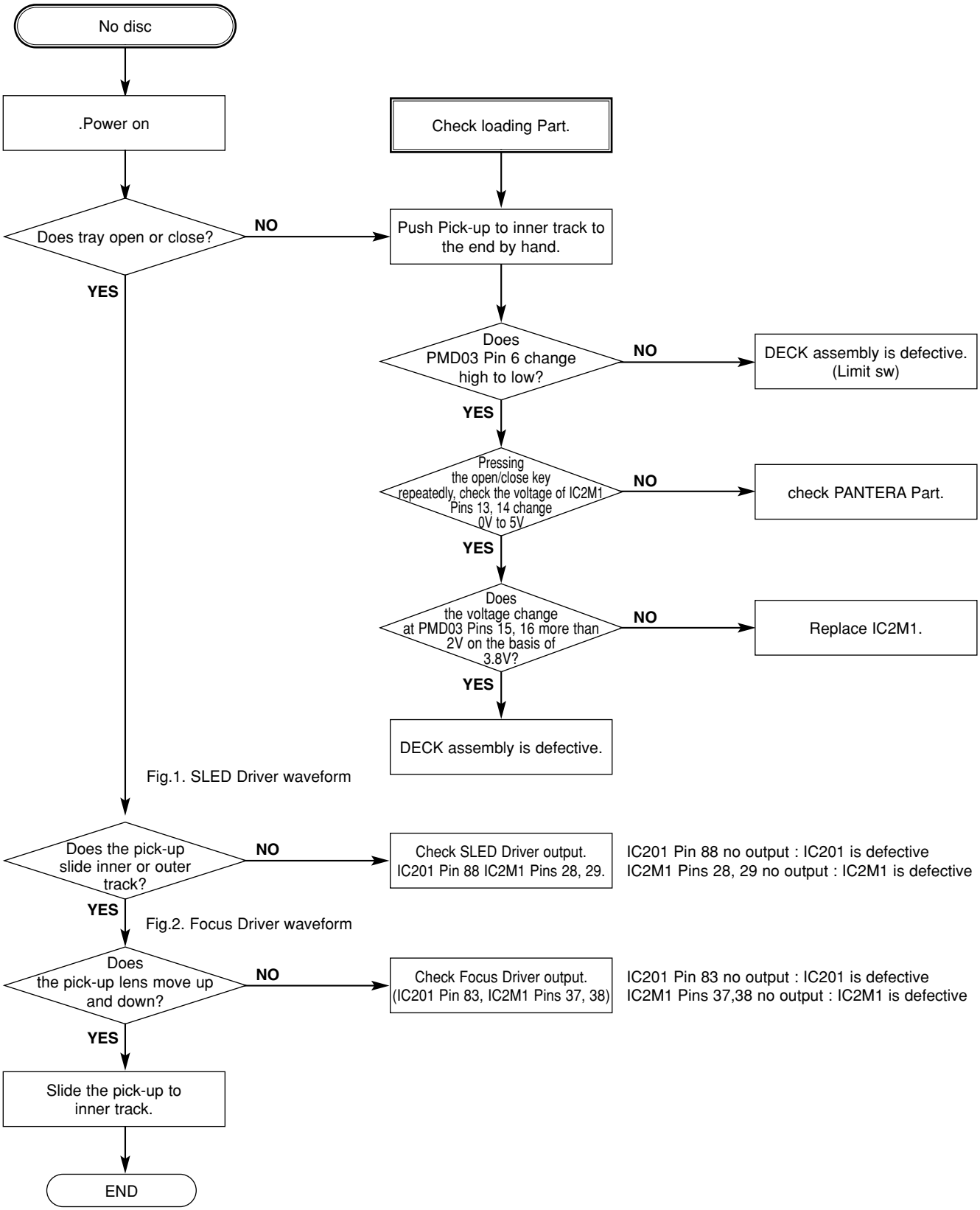

No disc
.Power on
Does tray open or close?
NO
YES
Check loading Part.
Push Pick-up to inner track to the end by hand.
Does PMD03 Pin 6 change high to low?
NO
DECK assembly is defective. (Limit sw)
YES
Pressing the open/close key repeatedly, check the voltage of IC2M1 Pins 13, 14 change 0V to 5V
NO
check PANTERA Part.
YES
Does the voltage change at PMD03 Pins 15, 16 more than 2V on the basis of 3.8V?
NO
Replace IC2M1.
YES
DECK assembly is defective.
Does the pick-up slide inner or outer track?
NO
Check SLED Driver output. IC201 Pin 88 IC2M1 Pins 28, 29.
IC201 Pin 88 no output : IC201 is defective
IC2M1 Pins 28, 29 no output : IC2M1 is defective
YES
Does the pick-up lens move up and down?
NO
Check Focus Driver output. (IC201 Pin 83, IC2M1 Pins 37, 38)
IC201 Pin 83 no output : IC201 is defective
IC2M1 Pins 37,38 no output : IC2M1 is defective
YES
Slide the pick-up to inner track.
END

Fig.1. SLED Driver waveform

Fig.2. Focus Driver waveform

C.

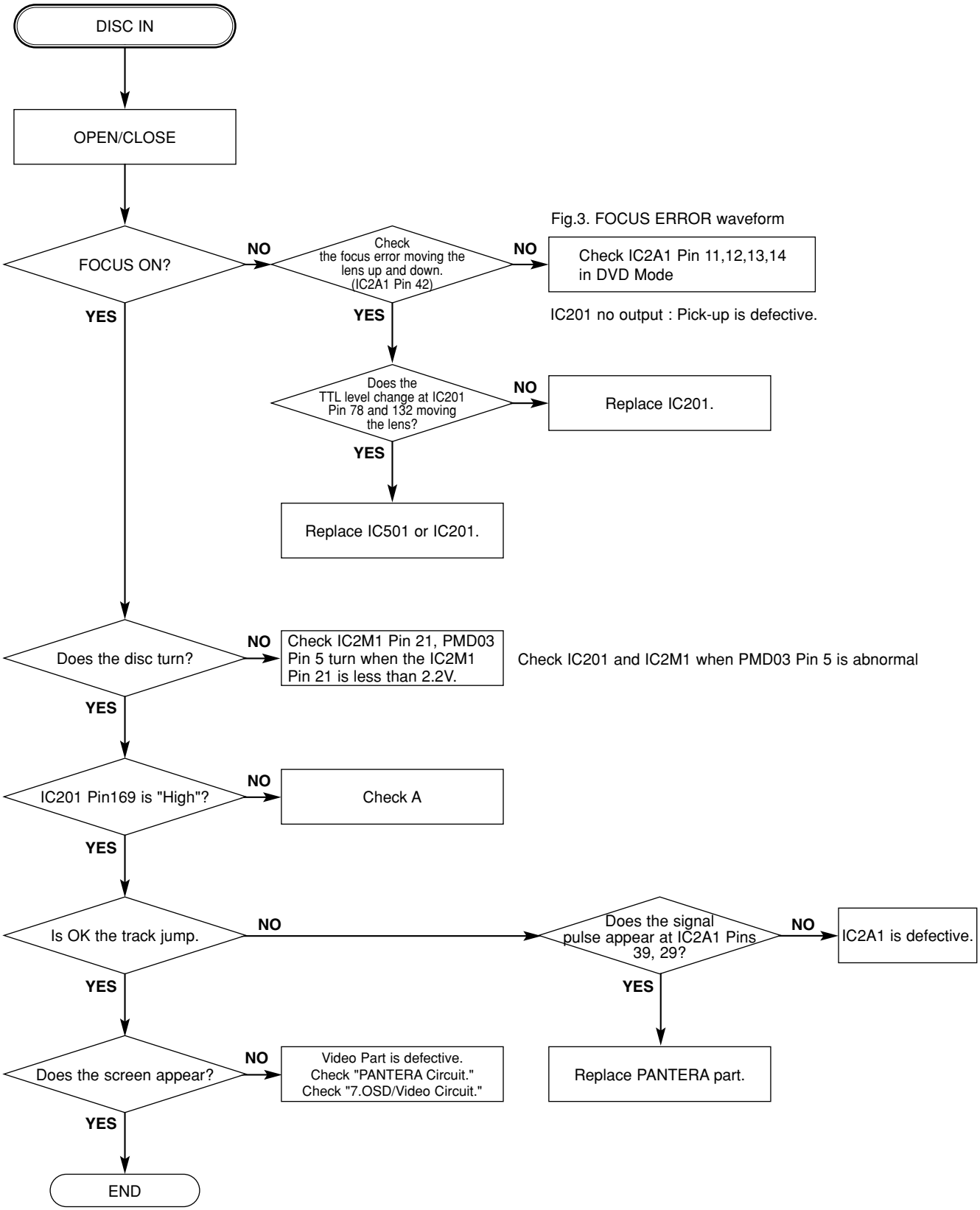
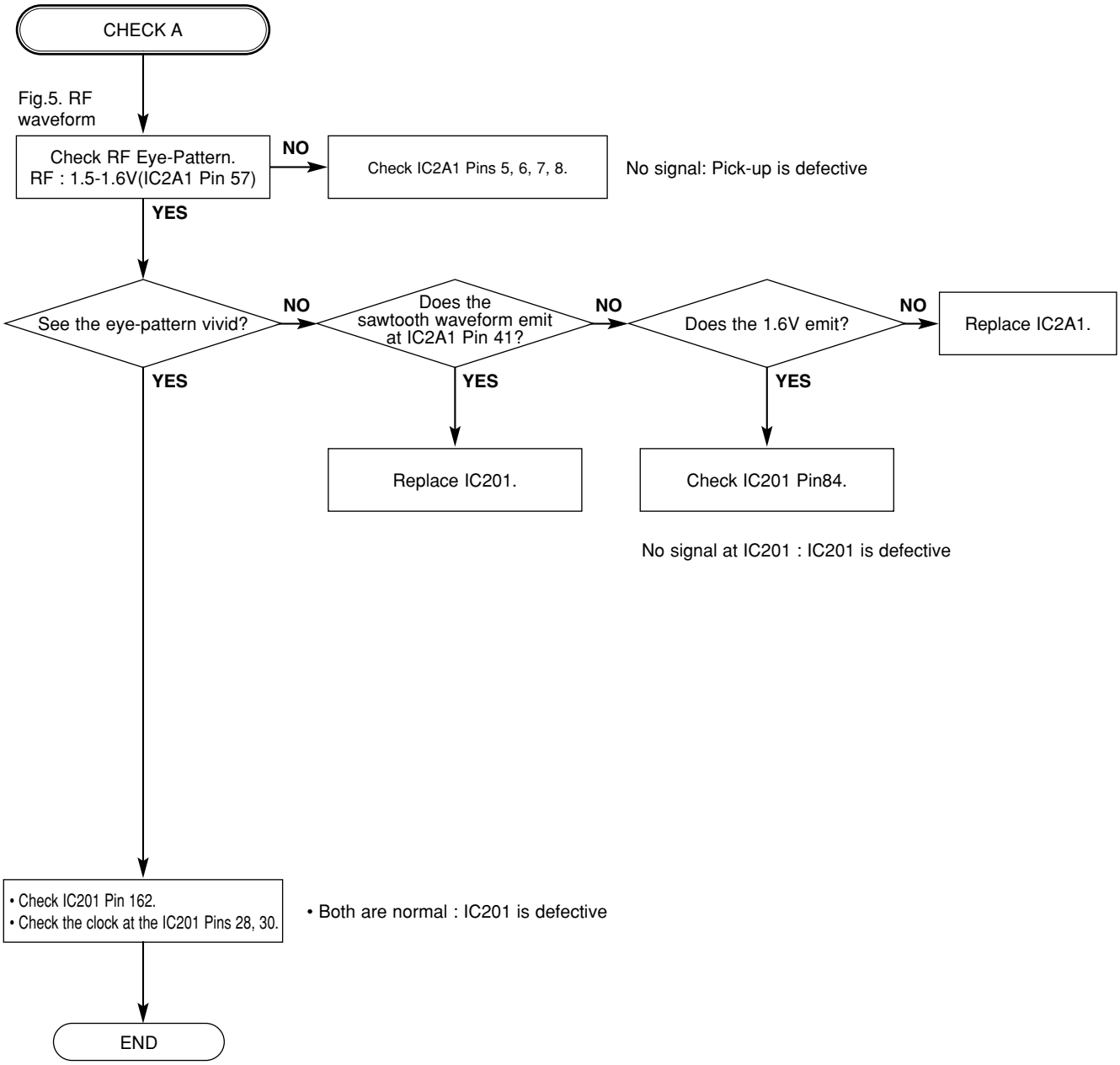


Fig.3. FOCUS ERROR waveform

IC201 no output : Pick-up is defective.

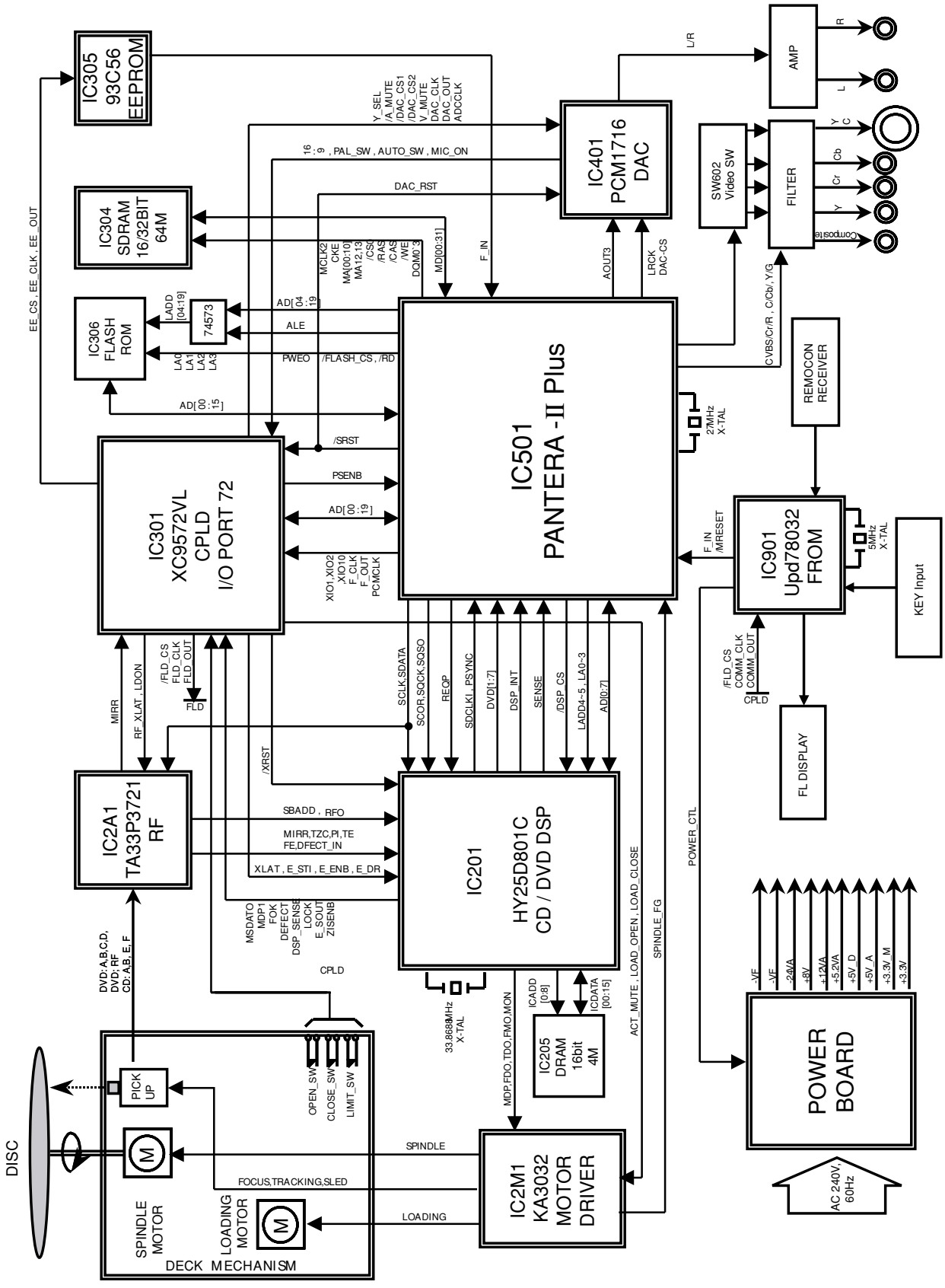
Check IC201 and IC2M1 when PMD03 Pin 5 is abnormal

D.

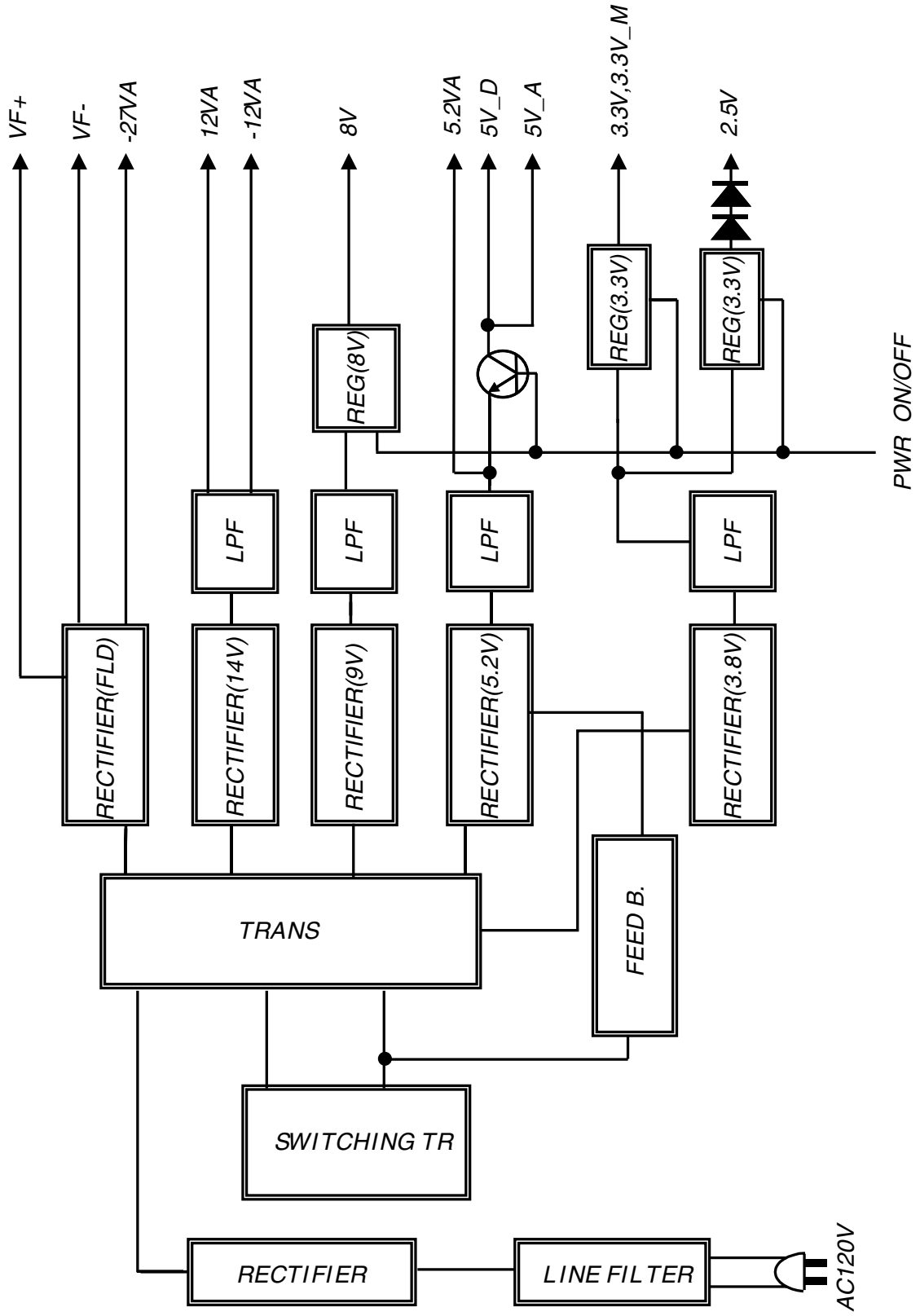

CHECK A
Fig.5. RF waveform
Check RF Eye-Pattern.
RF : 1.5-1.6V(IC2A1 Pin 57)
NO
Check IC2A1 Pins 5, 6, 7, 8.
No signal: Pick-up is defective
YES
See the eye-pattern vivid?
NO
Does the sawtooth waveform emit at IC2A1 Pin 41?
NO
Does the 1.6V emit?
NO
Replace IC2A1.
YES
YES
YES
Replace IC201.
Check IC201 Pin84.
No signal at IC201 : IC201 is defective
• Check IC201 Pin 162.
• Check the clock at the IC201 Pins 28, 30.
• Both are normal : IC201 is defective
END

11. BLOCK DIAGRAM

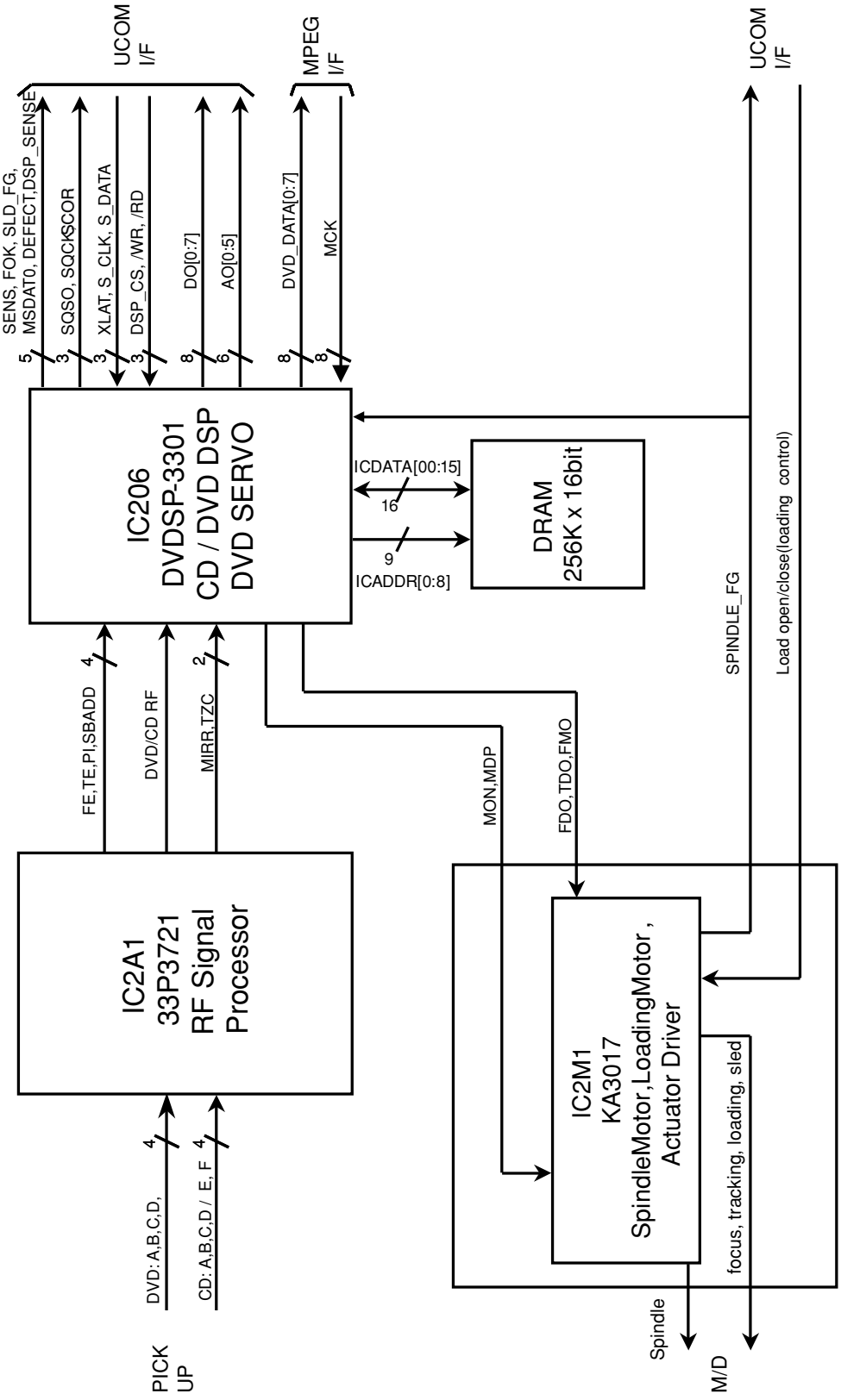
1. Overall Block Diagram



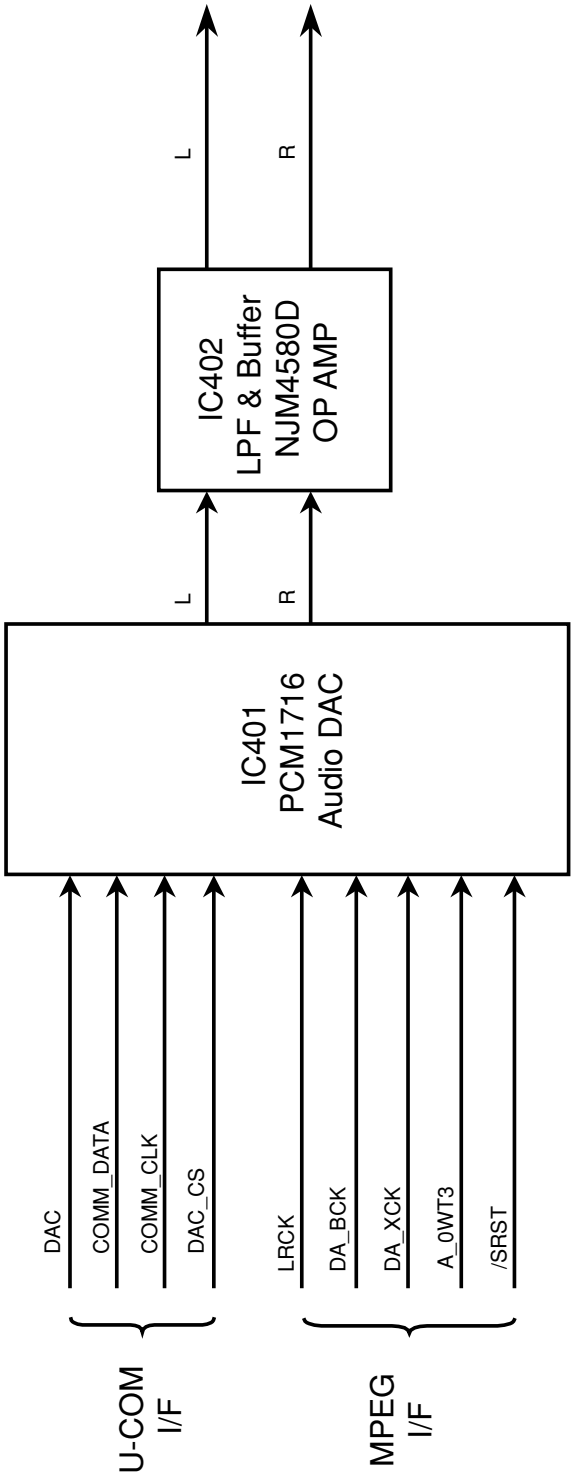
2. Power(SMPS) Block Diagram



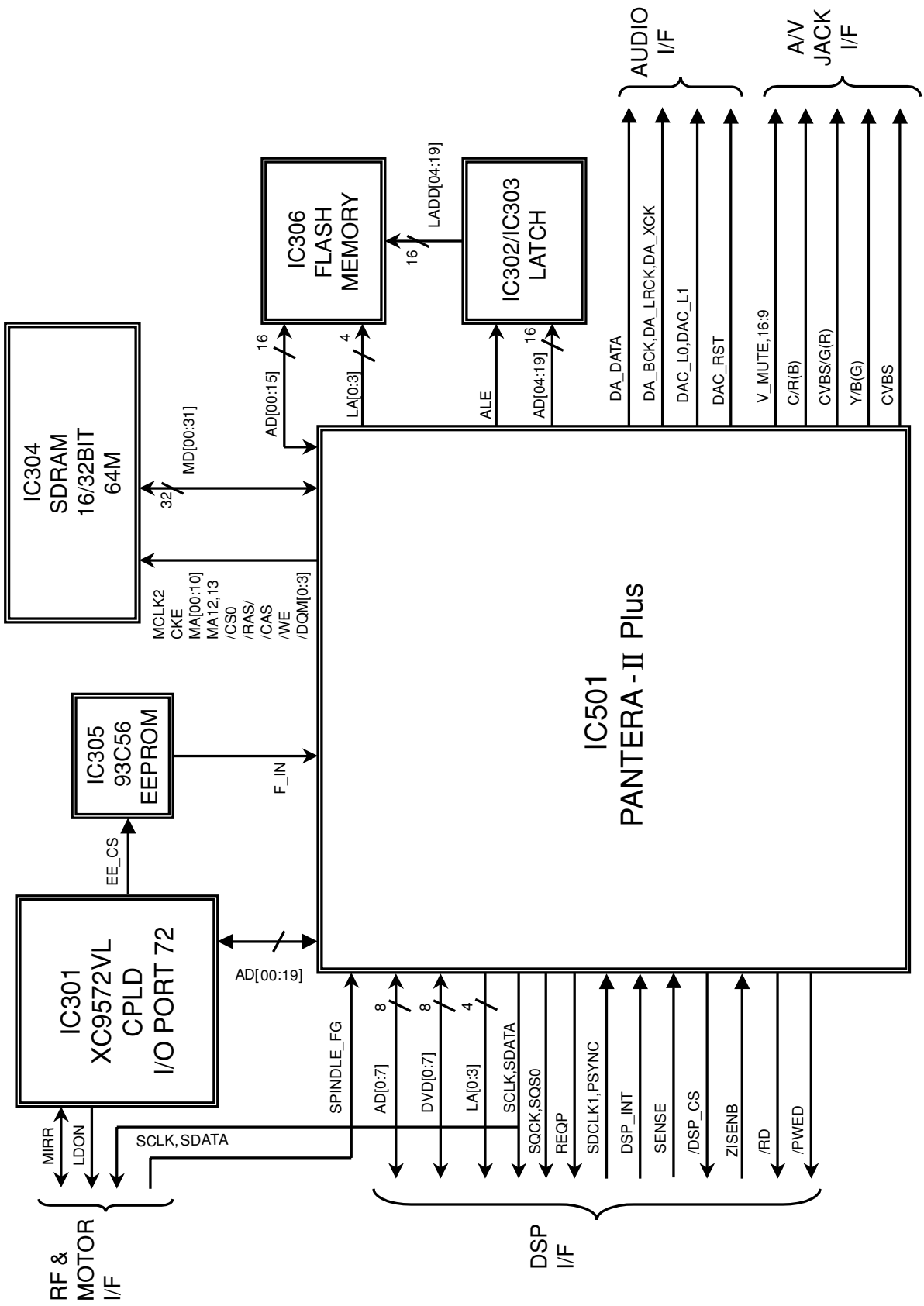
3. RF/CD DSP/DVD DSP/DVD SERVO Block Diagram



4. Audio Block Diagram

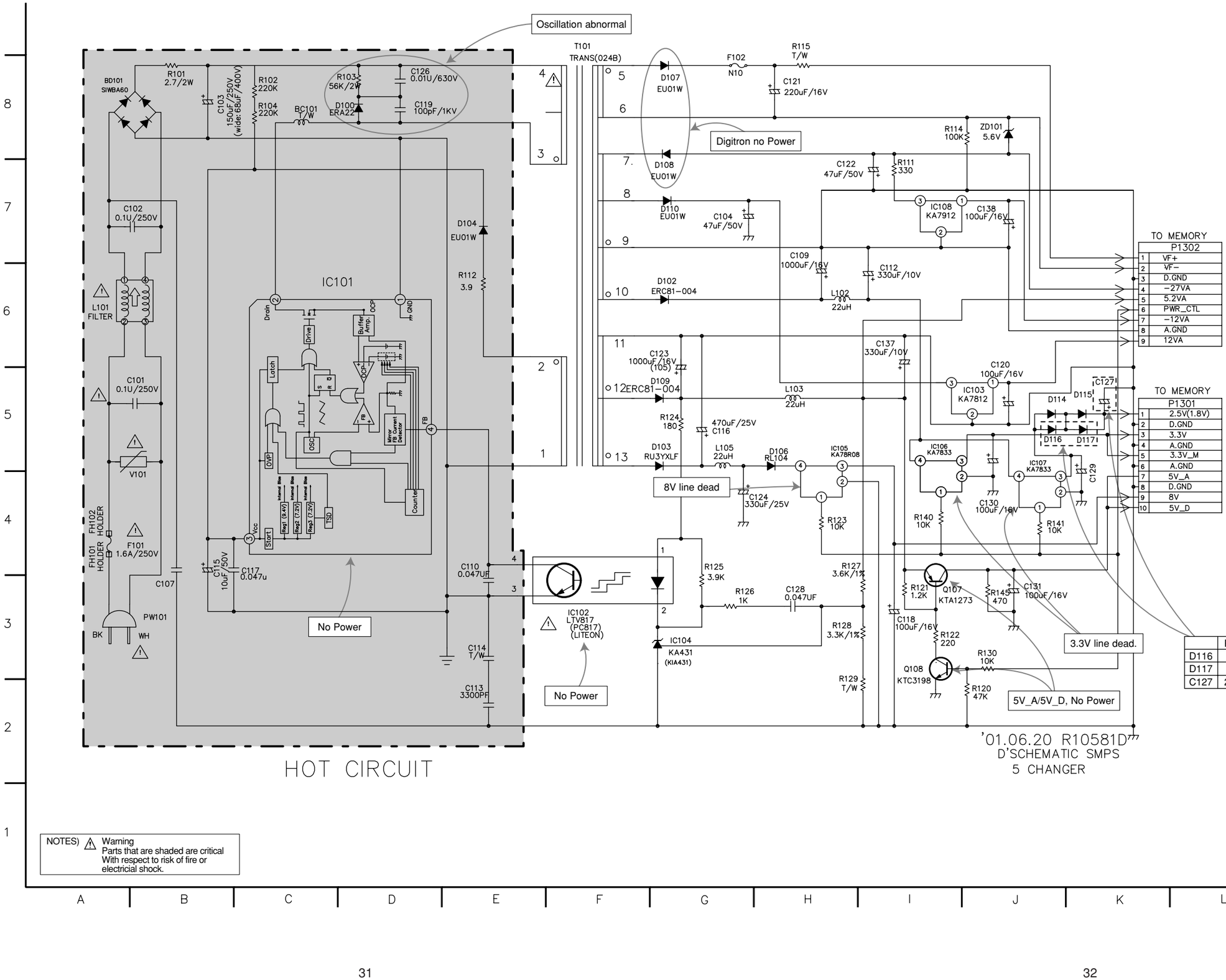


5. MPEG Block Diagram



1. POWER(SMPS) CIRCUIT DIAGRAM

NOTE :
1. Shaded(▩) parts are critical for safety. Replace only with specified part number.
2. Voltages are DC-measured with a digital voltmeter during Play mode.

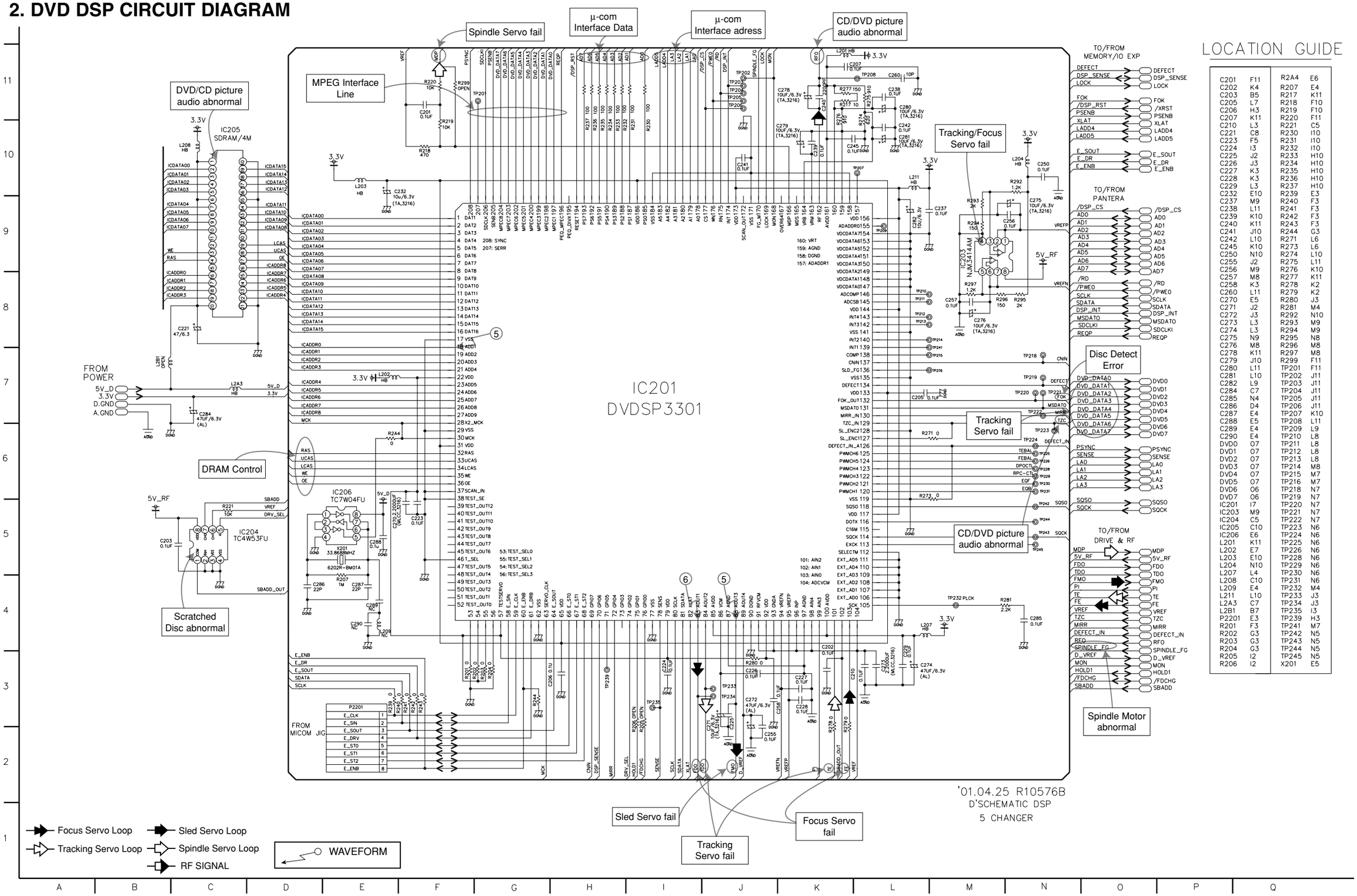


LOCATION GUIDE

BC101	C8	FH101	A4
BD101	A8	FH102	A4
C101	A5	IC101	C6
C102	A7	IC102	F3
C103	B8	IC103	J5
C104	G7	IC104	G3
C107	B3	IC105	H5
C109	H7	IC106	I5
C110	E4	IC107	J5
C112	I6	IC108	I7
C113	E2	L101	A6
C114	E3	L102	H6
C115	B3	L103	H5
C116	G5	L105	G5
C117	C4	P1301	K5
C118	I3	P1302	L7
C119	D8	PW101	B3
C120	J6	Q107	I3
C121	H8	Q108	I3
C122	H7	R101	B8
C123	G6	R102	C8
C124	G4	R103	D8
C126	D8	R104	C8
C127	K5	R111	I7
C128	H3	R112	E6
C129	K4	R114	I8
C130	J4	R115	H9
C131	J3	R120	J2
C137	I6	R121	I3
C138	J7	R122	I3
D100	C8	R123	H4
D102	G6	R124	G5
D103	G5	R125	G4
D104	E7	R126	G3
D106	H5	R127	H4
D107	G8	R128	H3
D108	G7	R129	H2
D109	G5	R130	J3
D110	G7	R140	I4
D114	J5	R141	J4
D115	K5	R145	J3
D116	J5	T101	F9
D117	K5	V101	B4
F102	G8	ZD101	J8

	PANTERA-II	PANTERA-II Plus
D116	1N17	Tin Wire
D117	1N17	Tin Wire
C127	2200uF/6.3V	220uF/6.3V

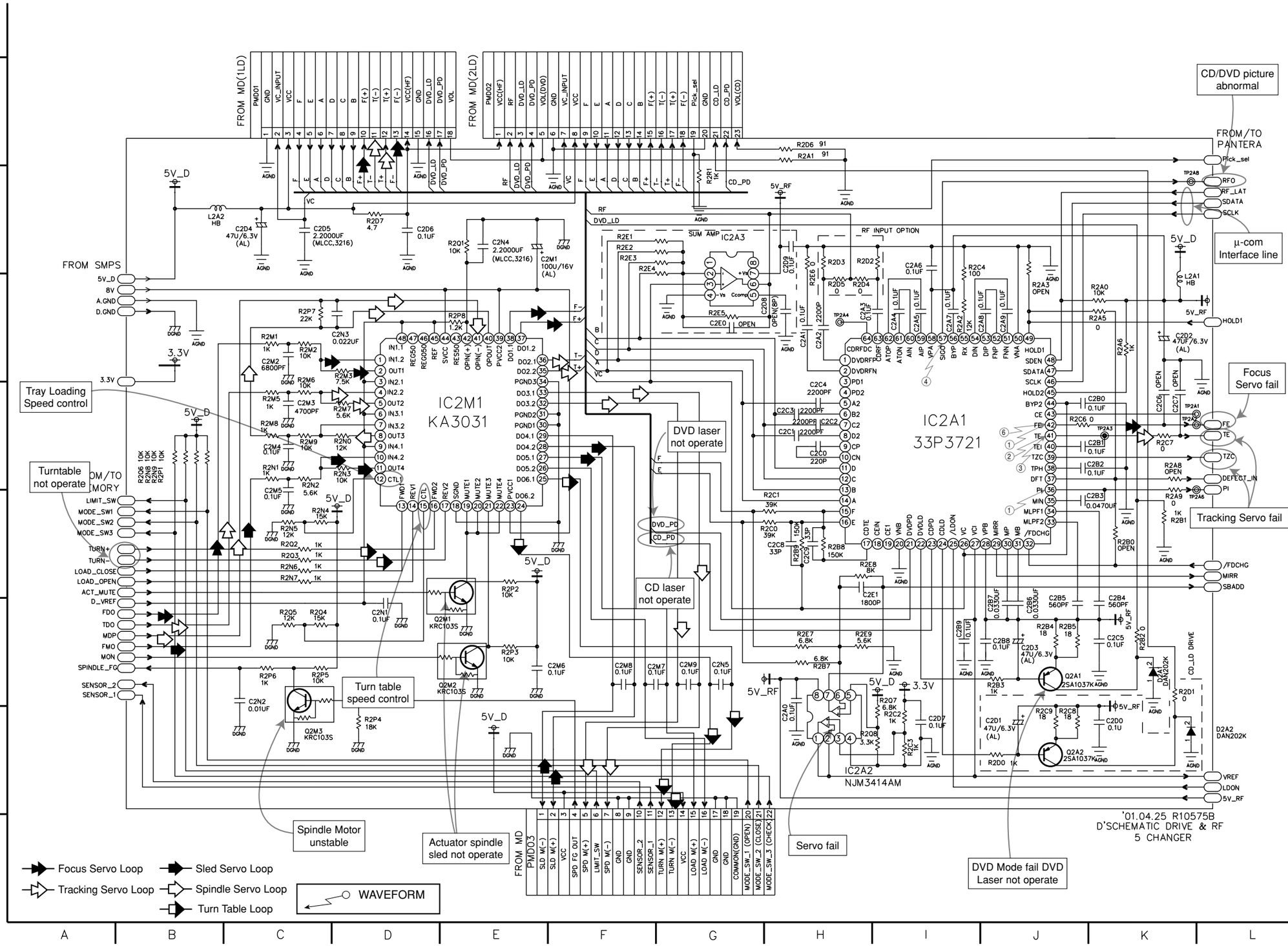
2. DVD DSP CIRCUIT DIAGRAM



LOCATION GUIDE

C201	F11	R2A4	E6
C202	K4	R207	E4
C203	B5	R217	K11
C205	L7	R218	F10
C206	H3	R219	F10
C207	K11	R220	F11
C210	L3	R221	C5
C221	C8	R230	I10
C223	F5	R231	I10
C224	I3	R232	I10
C225	J2	R233	H10
C226	J3	R234	H10
C227	K3	R235	H10
C228	K3	R236	H10
C229	L3	R237	H10
C232	E10	R239	E3
C237	M9	R240	F3
C238	L11	R241	F3
C239	K10	R242	F3
C240	K11	R243	F3
C241	J10	R244	G3
C242	L10	R271	L6
C245	K10	R273	L6
C250	N10	R274	L10
C255	J2	R275	L11
C256	M9	R276	K10
C257	M8	R277	K11
C258	K3	R278	K2
C260	L11	R279	K2
C270	E5	R280	J3
C271	J2	R281	M4
C272	J3	R292	N10
C273	L3	R293	M9
C274	L3	R294	M9
C275	N9	R295	N8
C276	M8	R296	M8
C278	K11	R297	M8
C279	J10	R299	F11
C280	L11	TP201	F11
C281	L10	TP202	J11
C282	L9	TP203	J11
C284	C7	TP204	J11
C285	N4	TP205	J11
C286	D4	TP206	J11
C287	E4	TP207	K10
C288	E5	TP208	L11
C289	E4	TP209	L9
C290	E4	TP210	L8
DVD0	O7	TP211	L8
DVD1	O7	TP212	L8
DVD2	O7	TP213	L8
DVD3	O7	TP214	M8
DVD4	O7	TP215	M7
DVD5	O7	TP216	M7
DVD6	O6	TP218	N7
DVD7	O6	TP219	N7
IC201	I7	TP220	N7
IC203	M9	TP221	N7
IC204	C5	TP222	N7
IC205	C10	TP223	N6
IC206	E6	TP224	N6
L201	K11	TP225	N6
L202	E7	TP226	N6
L203	E10	TP228	N6
L204	N10	TP229	N6
L207	L4	TP230	N6
L208	C10	TP231	N6
L209	E4	TP232	M4
L211	L10	TP233	J3
L2A3	C7	TP234	J3
L2B1	B7	TP235	I3
P2201	E3	TP239	H3
R201	F3	TP241	M7
R202	G3	TP242	N5
R203	G3	TP243	N5
R204	G3	TP244	N5
R205	I2	TP245	N5
R206	I2	X201	E5

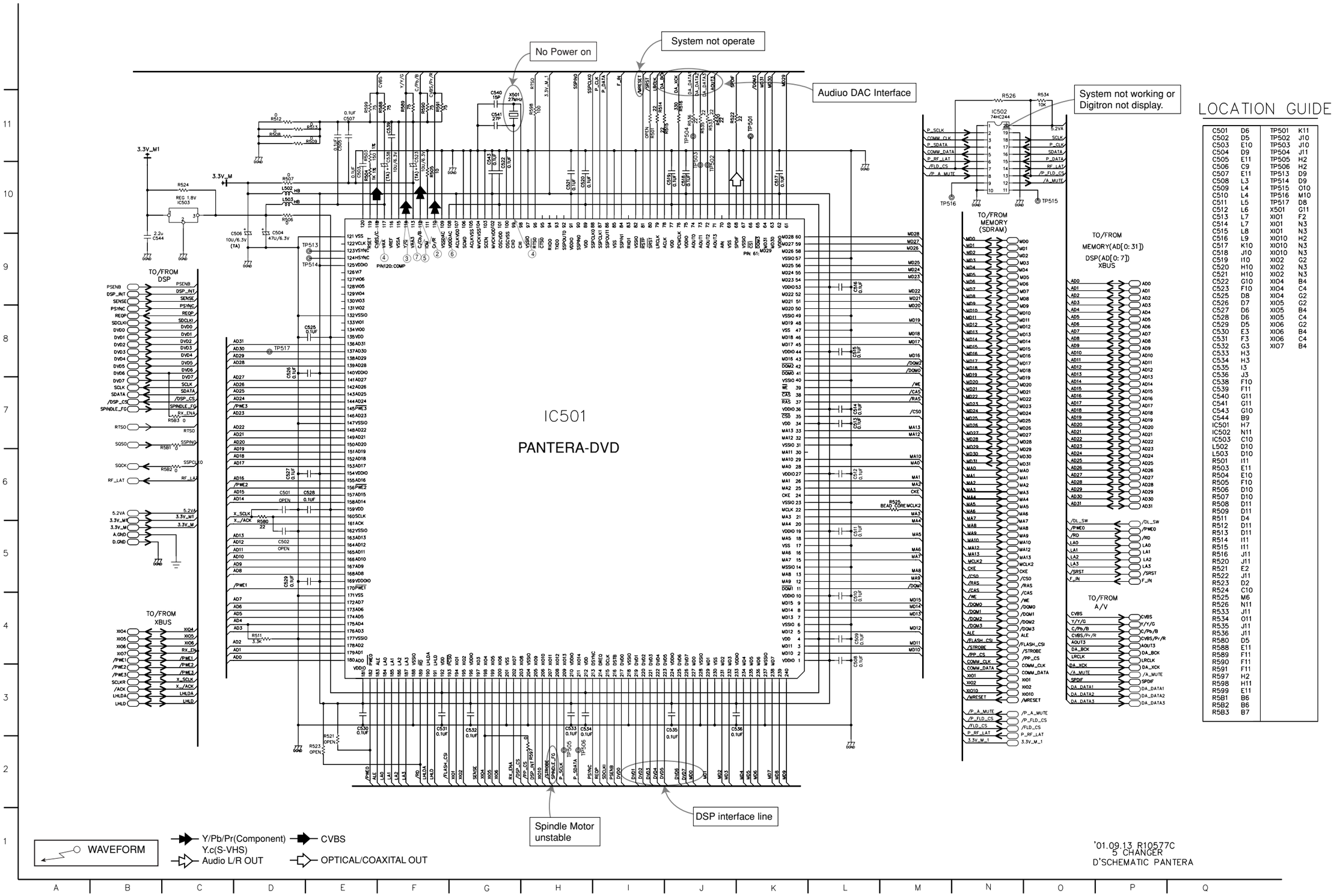
3. DRIVE & RF CIRCUIT DIAGRAM



LOCATION GUIDE

C2A0	H2	D2A2	L2	R2M7	D5
C2A1	H6	IC2A1	I5	R2M8	C5
C2A2	H6	IC2A2	H2	R2M9	C5
C2A3	H6	IC2A3	G7	R2N0	D5
C2A4	I6	IC2M1	E5	R2N1	C5
C2A5	I6	L2A1	K6	R2N2	C5
C2A6	I7	L2A2	B7	R2N3	D5
C2A7	I6	Q2A1	J3	R2N4	C4
C2A8	J6	Q2A2	J2	R2N5	C4
C2A9	J6	Q2M1	D3	R2N6	C4
C2B0	K5	Q2M2	D3	R2N7	C4
C2B1	K5	Q2M3	C2	R2N8	B5
C2B2	J5	R2A0	K6	R2N9	B5
C2B3	J4	R2A1	H8	R2P1	B5
C2B4	K3	R2A2	I6	R2P2	E4
C2B5	J3	R2A3	J6	R2P3	E3
C2B6	J3	R2A5	K6	R2P4	D2
C2B7	J3	R2A6	K6	R2P5	C3
C2B8	J3	R2A8	K5	R2P6	C3
C2B9	I3	R2A9	K4	R2P7	C6
C2C0	H5	R2B0	K4	R2P8	E6
C2C1	H5	R2B1	K4	R2Q1	E7
C2C2	H5	R2B2	K3	R2Q2	C4
C2C3	H5	R2B3	J3	R2Q3	C4
C2C4	H5	R2B4	J3	R2Q4	C3
C2C5	K3	R2B5	J3	R2Q5	C3
C2C6	K5	R2B7	H3	R2Q6	B5
C2C7	K5	R2B8	H4	R2Q7	I3
C2C8	H4	R2B9	H4	R2Q8	H2
C2C9	H4	R2C0	G4	R2R1	G7
C2D0	K2	R2C1	H4	TP2A1	K5
C2D1	J2	R2C2	I2	TP2A2	K5
C2D2	K6	R2C3	I2	TP2A3	K5
C2D3	J3	R2C4	I7	TP2A4	H6
C2D4	C7	R2C6	J5	TP2A6	K4
C2D5	C7	R2C7	K5	TP2A8	K7
C2D6	D7	R2C8	J2	TZC	L5
C2D7	I2	R2C9	J2	VC	F7
C2D8	H6	R2D0	J2	VC	F6
C2D9	H7	R2D1	K3	VC	C7
C2E0	G6	R2D2	H7	VREF	L2
C2E1	H4	R2D3	H7		
C2M1	E7	R2D4	H6		
C2M2	C6	R2D5	H6		
C2M3	C5	R2D6	H8		
C2M4	C5	R2D7	D7		
C2M5	C4	R2E1	F7		
C2M6	F3	R2E2	F7		
C2M7	F3	R2E3	F7		
C2M8	F3	R2E4	F7		
C2M9	G3	R2E5	G6		
C2N1	D3	R2E6	H6		
C2N2	C3	R2E7	H3		
C2N3	D6	R2E8	H4		
C2N4	E7	R2E9	H3		
C2N5	G3	R2M1	C6		
CD_PD	G7	R2M2	C6		
CD_PD	F4	R2M3	D6		
D.GND	A6	R2M5	C5		
D2A1	K3	R2M6	C5		

4. PANTERA CIRCUIT DIAGRAM

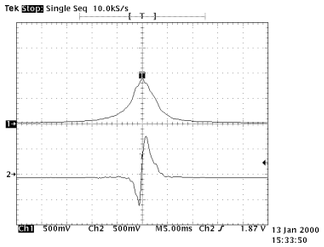


LOCATION GUIDE

C501	D6	TP501	K11
C502	D5	TP502	J10
C503	E10	TP503	J10
C504	D9	TP504	J11
C505	E11	TP505	H2
C506	C9	TP506	H2
C507	E11	TP513	D9
C508	L3	TP514	D9
C509	L4	TP515	O10
C510	L4	TP516	M10
C511	L5	TP517	D8
C512	L6	X501	G11
C513	L7	XI01	F2
C514	L7	XI01	N3
C515	L8	XI01	N3
C516	L9	XI010	H2
C517	K10	XI010	N3
C518	J10	XI010	N3
C519	I10	XI02	G2
C520	H10	XI02	N3
C521	H10	XI02	N3
C522	G10	XI04	B4
C523	F10	XI04	C4
C525	D8	XI04	G2
C526	D7	XI05	G2
C527	D6	XI05	B4
C528	D6	XI05	C4
C529	D5	XI06	G2
C530	E3	XI06	B4
C531	F3	XI06	C4
C532	G3	XI07	B4
C533	H3		
C534	H3		
C535	I3		
C536	J3		
C538	F10		
C539	F11		
C540	G11		
C541	G11		
C543	G10		
C544	B9		
IC501	H7		
IC502	N11		
IC503	C10		
L502	D10		
L503	D10		
R501	I11		
R503	E11		
R504	E10		
R505	F10		
R506	D10		
R507	D10		
R508	D11		
R509	D11		
R511	D4		
R512	D11		
R513	D11		
R514	I11		
R515	I11		
R516	J11		
R520	J11		
R521	E2		
R522	J11		
R523	D2		
R524	C10		
R525	M6		
R526	N11		
R533	J11		
R534	O11		
R535	J11		
R536	J11		
R580	D5		
R588	E11		
R589	F11		
R590	F11		
R591	F11		
R597	H2		
R598	H11		
R599	E11		
R5B1	B6		
R5B2	B6		
R5B3	B7		

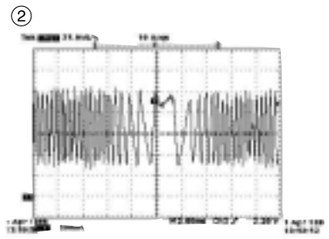
• WAVEFORMS

①



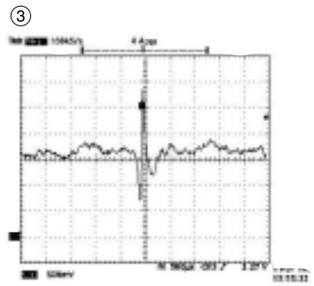
IC2A1 Pin 42, Focus Error
IC2A1 Pin 36, Pi

②



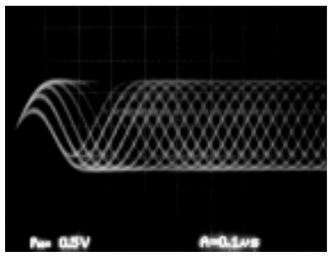
IC2A1 Pin 41
Tracking Error

③



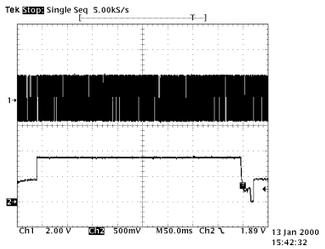
IC2A1 Pin 41
VBR TRACKING Error

④



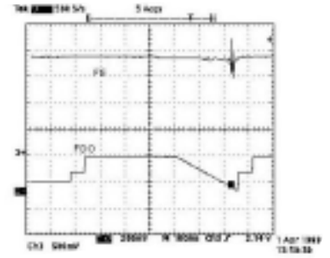
IC2A1 Pin 57,
RF

⑤



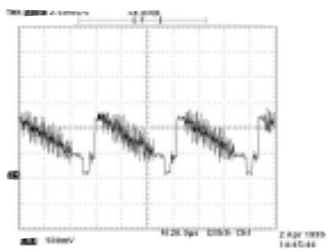
IC201 Pin 88, SLED Drive(FMO)
IC201 Pin 18, SLED FG

⑥



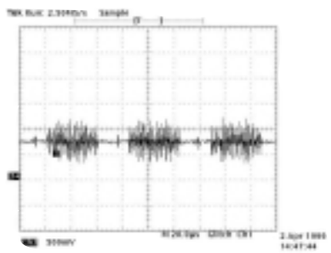
IC2A1 Pin42, Focus Error(in Focus Search)
IC201 Pin 83, Focus Drive(FDO)

①



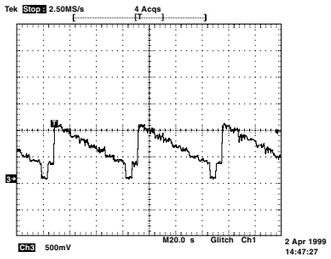
IC501 Pin 118, Composite

②



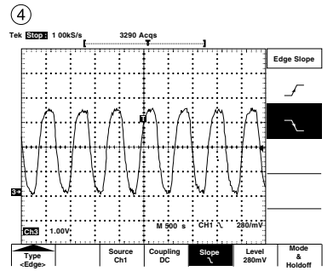
IC501 Pin 112, Chrominance
(Super video out Mode)

③



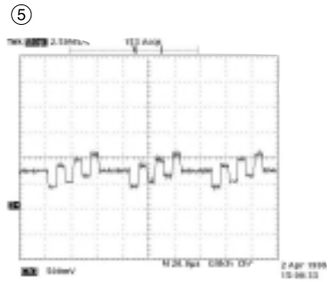
IC501 Pin 114, Luminance
(Super video out Mode)

④



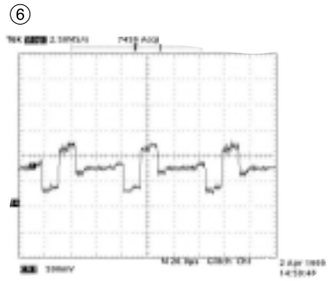
IC501 Pin 99,
PANTER MAIN

⑤



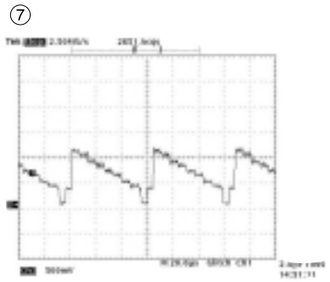
IC501 Pin 112
Component Pb

⑥



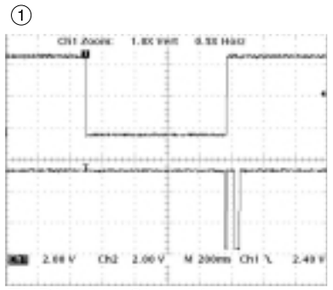
IC501 Pin 110
Component Pr

⑦



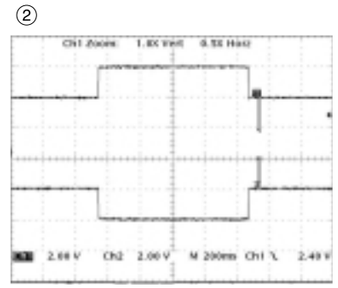
IC501 Pin 114
Component Y

①



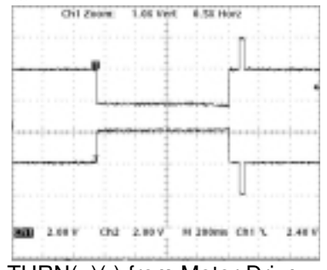
TURN(+)(-) Signal from μ-com

②



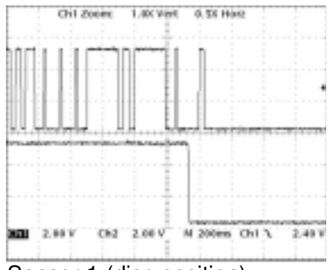
TURN(+)(-) from Motor Drive
Forward turn

③



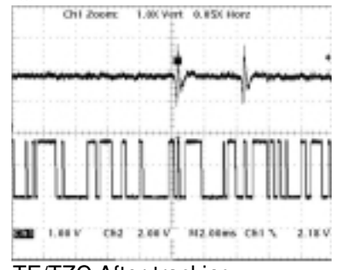
TURN(+)(-) from Motor Drive
Reverse turn

④



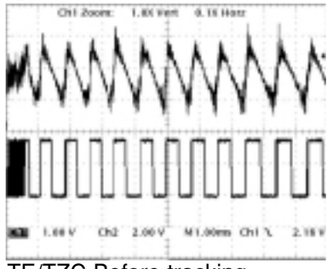
Sensor 1 (disc position)
Sensor 2 (disc ready)

⑤



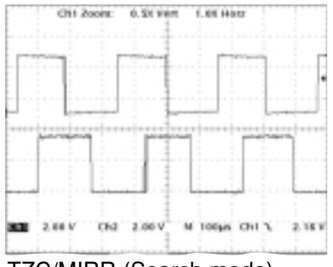
TE/TZC After tracking
servo ON (Play mode)

⑥



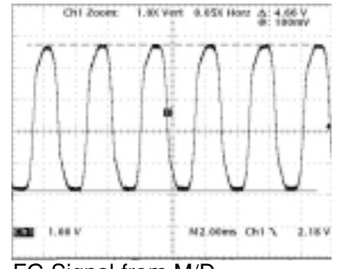
TE/TZC Before tracking
servo ON

⑦



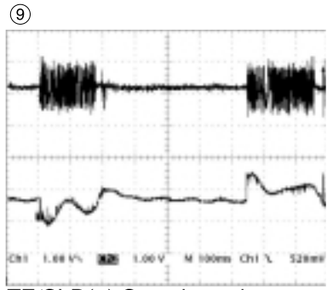
TZC/MIRR (Search mode)

⑧



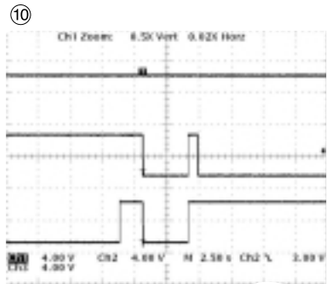
FG Signal from M/D
(Play mode)

⑨



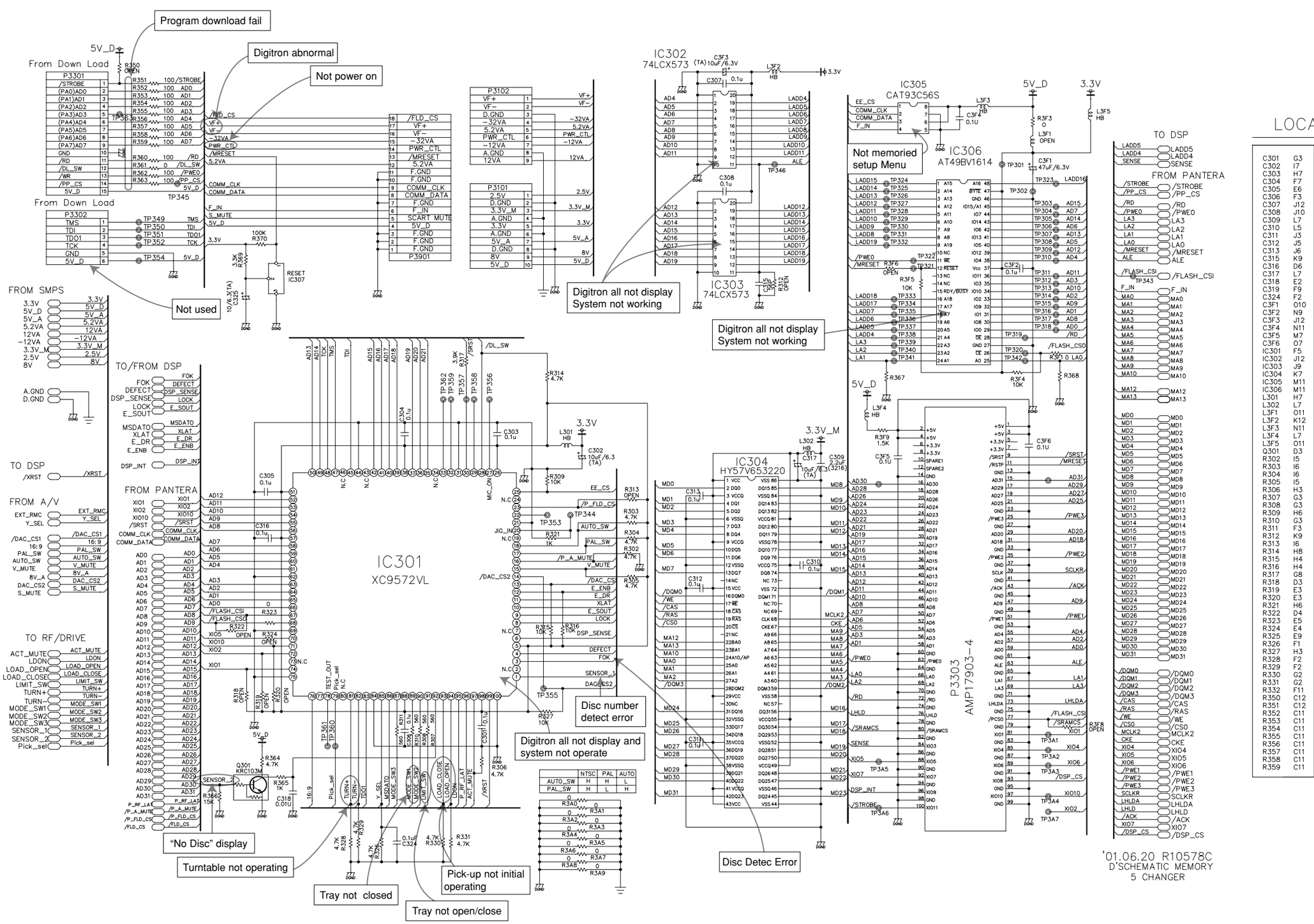
TE/SLD(+) Search mode
(outter & inner)

⑩



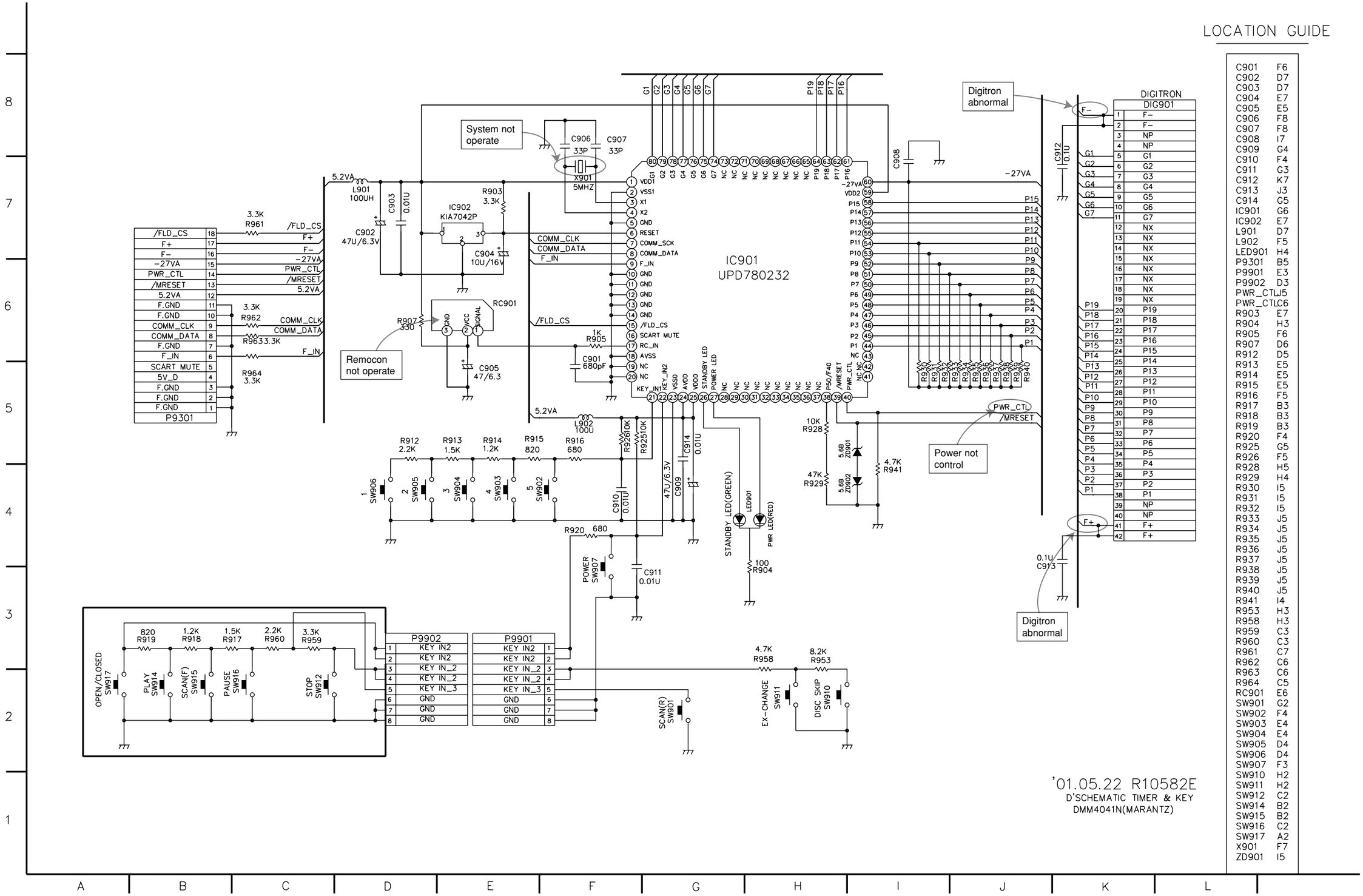
Tray open ⟷ Tray closed

5. MEMORY CIRCUIT DIAGRAM



C301	G3	R360	C11	TP356	H7
C302	I7	R361	C10	TP357	G7
C303	H7	R362	C10	TP358	G7
C304	F7	R363	C10	TP359	G7
C305	E6	R364	E3	TP360	E3
C306	F3	R365	E2	TP361	E3
C307	J12	R366	D2	TP362	G7
C308	J10	R367	M8	TP363	C11
C309	L7	R368	O8	TP3A1	O3
C310	L5	R3A0	H2	TP3A2	O3
C311	J3	R3A1	I2	TP3A3	O3
C312	J5	R3A2	H2	TP3A4	O2
C313	J6	R3A3	I2	TP3A5	L3
C315	K9	R3A4	H2	TP3A6	L2
C316	D6	R3A5	I2	XI04	P3
C317	L7	R3A6	H2	XI04	P3
C318	E2	R3A7	I1	XI05	D4
C319	F9	R3A8	H1	XI05	L3
C324	F2	R3A9	I1	XI05	P3
C3F1	O10	R3F1	O8	XI05	P3
C3F2	N9	R3F3	O11	XI06	O3
C3F3	J12	R3F4	N8	XI06	P3
C3F4	N11	R3F5	M9	XI06	P3
C3F5	M7	R3F6	M9	XI07	L3
C3F6	O7	R3F8	O3	XI07	P2
IC301	F5	R3F9	M7	XI07	P2
IC302	J12	SCLKR	O5		
IC303	J9	TP301	N10		
IC304	K7	TP302	N10		
IC305	M11	TP303	O10		
IC306	M11	TP304	O10		
L301	H7	TP305	O10		
L302	L7	TP306	O10		
L3F1	O11	TP307	O10		
L3F2	K12	TP308	O9		
L3F3	N11	TP309	O9		
L3F4	L7	TP310	O9		
L3F5	O11	TP311	O9		
Q301	D3	TP312	O9		
R301	J2	TP313	O9		
R303	I6	TP314	O9		
R304	I6	TP315	O9		
R305	I5	TP316	O9		
R306	H3	TP317	O8		
R307	G3	TP318	O8		
R308	G3	TP319	N8		
R309	H6	TP320	N8		
R310	G3	TP321	M9		
R311	F3	TP322	M9		
R312	K9	TP323	O10		
R313	I6	TP324	M10		
R314	H8	TP325	M10		
R315	H4	TP326	M10		
R316	H4	TP327	M10		
R317	G8	TP328	M10		
R318	D3	TP329	M10		
R319	E3	TP330	M10		
R320	E3	TP331	M10		
R321	H6	TP332	M9		
R322	D4	TP333	M9		
R323	E5	TP334	M9		
R324	E4	TP335	M9		
R325	E9	TP336	M8		
R326	F1	TP337	M8		
R327	H3	TP338	M8		
R328	F2	TP339	M8		
R329	F2	TP340	M8		
R330	G2	TP341	M8		
R331	G2	TP342	N8		
R332	F11	TP343	P9		
R350	C12	TP344	I6		
R351	C12	TP345	C10		
R352	C11	TP346	K10		
R353	C11	TP349	C10		
R354	C11	TP350	C10		
R355	C11	TP351	C10		
R356	C11	TP352	C9		
R357	C11	TP353	H6		
R358	C11	TP354	C9		
R359	C11	TP355	H4		

6. TIMER & KEY CIRCUIT DIAGRAM

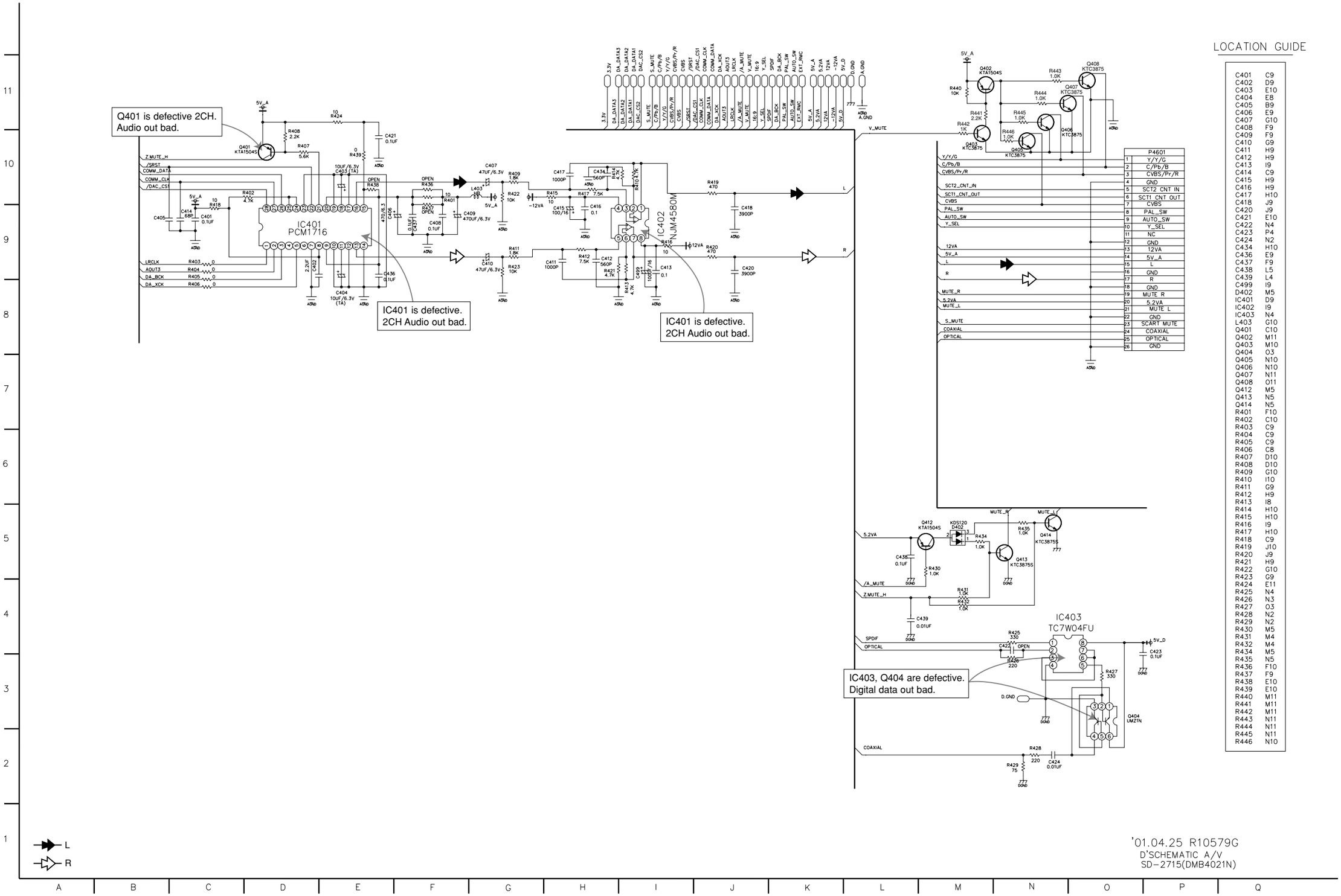


LOCATION GUIDE

C901	F6
C902	D7
C903	D7
C904	E7
C905	E5
C906	F8
C907	F8
C908	I7
C909	G4
C910	F4
C911	G3
C912	K7
C913	J3
C914	G5
IC901	G6
IC902	E7
L901	D7
L902	F5
LED901	H4
P9301	B5
P9901	E3
P9902	D3
PWR_CTL	J5
PWR_CTL	C6
R903	E7
R904	H3
R905	F6
R907	D6
R912	D5
R913	E5
R914	E5
R915	E5
R916	F5
R917	B3
R918	B3
R919	B3
R920	F4
R925	G5
R926	F5
R928	H5
R929	H4
R930	I5
R931	I5
R932	I5
R933	J5
R934	J5
R935	J5
R936	J5
R937	J5
R938	J5
R939	J5
R940	J5
R941	I4
R953	H3
R958	H3
R959	C3
R960	C3
R961	C7
R962	C6
R963	C6
R964	C5
RC901	E6
SW901	G2
SW902	F4
SW903	E4
SW904	E4
SW905	D4
SW906	D4
SW907	F3
SW910	H2
SW911	H2
SW912	C2
SW914	B2
SW915	B2
SW916	C2
SW917	A2
X901	F7
ZD901	I5

'01.05.22 R10582E
D'SCHEMATIC TIMER & KEY
DMM4041N(MARANTZ)

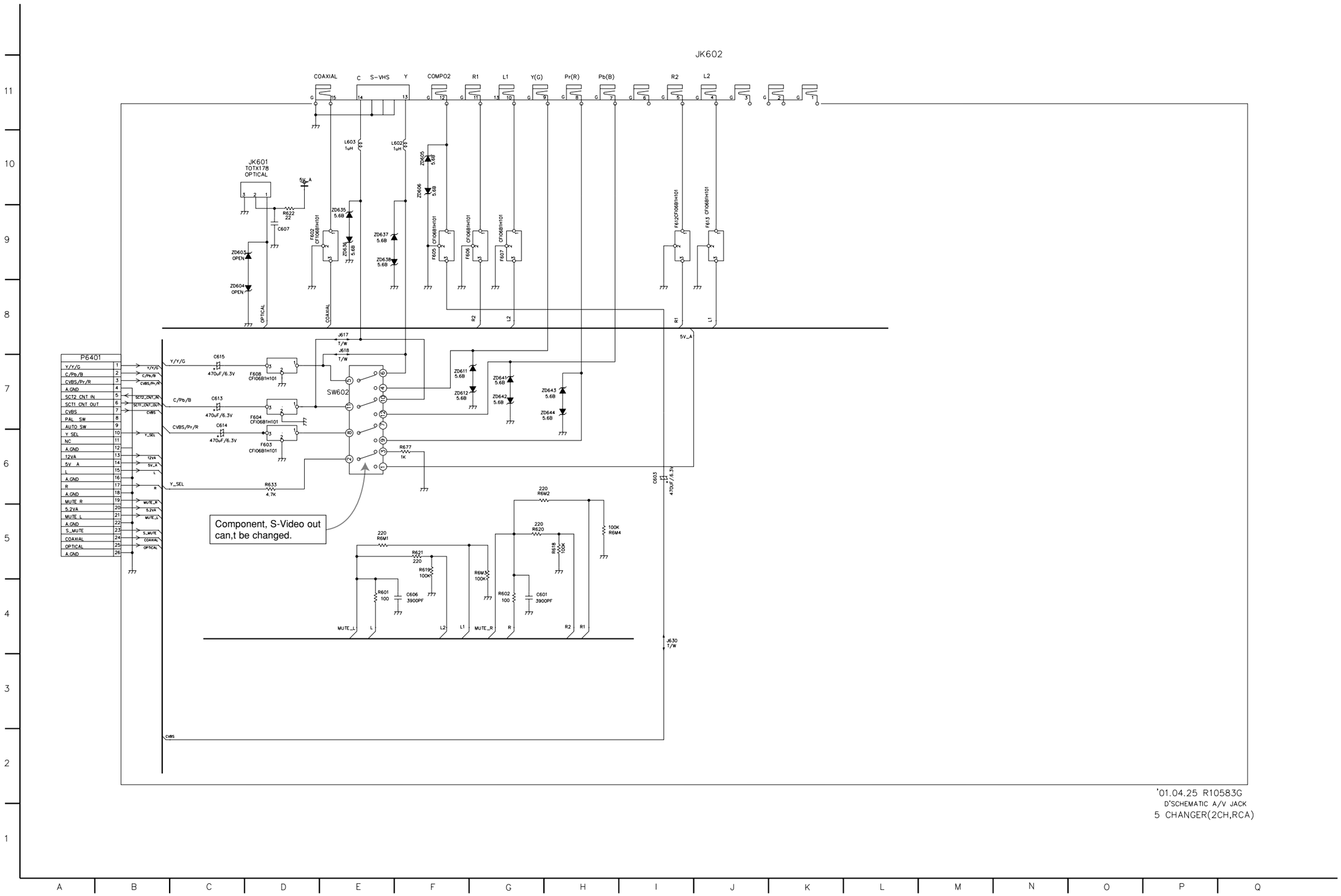
7. A/V CIRCUIT DIAGRAM



LOCATION GUIDE

C401	C9
C402	D9
C403	E10
C404	E8
C405	B9
C406	E9
C407	G10
C408	F9
C409	F9
C410	G9
C411	H9
C412	H9
C413	I9
C414	C9
C415	H9
C416	H9
C417	H10
C418	J9
C420	J9
C421	E10
C422	N4
C423	P4
C424	N2
C434	H10
C436	E9
C437	F9
C438	L5
C439	L4
C499	I9
D402	M5
IC401	D9
IC402	I9
IC403	N4
L403	G10
Q401	C10
Q402	M11
Q403	M10
Q404	O3
Q405	N10
Q406	N10
Q407	N11
Q408	O11
Q412	M5
Q413	N5
Q414	N5
R401	F10
R402	C10
R403	C9
R404	C9
R405	C9
R406	C8
R407	D10
R408	D10
R409	G10
R410	I10
R411	G9
R412	H9
R413	I8
R414	H10
R415	H10
R416	I9
R417	H10
R418	C9
R419	J10
R420	J9
R421	H9
R422	G10
R423	G9
R424	E11
R425	N4
R426	N3
R427	O3
R428	N2
R429	N2
R430	M5
R431	M4
R432	M4
R434	M5
R435	N5
R436	F10
R437	F9
R438	E10
R439	E10
R440	M11
R441	M11
R442	M11
R443	N11
R444	N11
R445	N11
R446	N10

8. A/V JACK CIRCUIT DIAGRAM



'01.04.25 R10583G
D'SCHEMATIC A/V JACK
5 CHANGER(2CH,RCA)

• CIRCUIT VOLTAGE CHART

MODE / PIN NO.	LEVEL(V)
PANTERA	
IC501	
1	3.18
2	1.3
3	1.4
4	2.2
5	1.5
6	0
7	1.5
8	1.4
9	1.6
10	3.1
11	0.7
12	0.15
13	0.15
14	0
15	0
16	1.7
17	1.4
18	0
19	1.5
20	1.6
21	0
22	1.6
23	0
24	3.1
25	1.7
26	1.4
27	3.1
28	1.5
29	0.15
30	
31	0
32	0.7
33	1.5
34	2.2
35	2
36	3.1
37	2.9
38	2.2
39	2.9
40	0
41	0
42	0
43	1.6
44	3.1
45	1.6
46	1.5
47	0
48	1.4
49	0
50	1.5
51	1.7
52	1.2
53	3.1

MODE / PIN NO.	LEVEL(V)
54	1.6
55	1.4
56	1.5
57	0
58	1.6
59	1.4
60	1.5
61	1.4
62	3.1
63	1
64	1.5
65	0.005
66	0.5
67	0.003
68	1.58
69	0
70	3.1
71	1.2
72	1.2
73	1.2
74	1.2
75	3.1
76	1.65
77	2.2
78	1.5
79	1.5
80	3.1
81	3.1
82	0.001
83	3.1
84	3.7
85	0
86	
87	3.1
88	3.1
89	2.1
90	0.004
91	3.1
92	0
93	
94	
95	
96	
97	0
98	
99	
100	0
101	2.1
102	3.1
103	0
104	0
105	0
106	0
107	2.1
108	2.1

MODE / PIN NO.	LEVEL(V)
109	0
110	0.8
111	0.9
112	1.3
113	3.1
114	0.78
115	0
116	1.26
117	2.38
118	0.08
119	1.2
120	2
121	0
122	3.1
123	3.1
124	3.1
125	3.1
126	
127	
128	
129	
130	
131	
132	0
133	
134	
135	2.2
136	
137	3.1
138	3.1
139	3.1
140	3.1
141	3.1
142	3.1
143	3.1
144	3.1
145	3.1
146	3.1
147	0
148	3.1
149	3.1
150	3.1
151	3.1
152	3.1
153	3.1
154	3.1
155	3.1
156	3.1
157	3.1
158	3.1
159	2.2
160	1.5
161	3.1
162	
163	0

MODE / PIN NO.	LEVEL(V)
164	3.1
165	3.1
166	3.1
167	3.1
168	3.1
169	3.1
170	3.1
171	0
172	3.1
173	3.1
174	3.1
175	1.5
176	3.1
177	0
178	3.1
179	3.1
180	3.1
181	3.1
182	3.18
183	0.086
184	3
185	2.4
186	2.3
187	0
188	0
189	3.1
190	0
191	0.017
192	2.2
193	3.1
194	3.1
195	0
196	3.18
197	1.3
198	3.1
199	3.1
200	3.1
201	0
202	2.3
203	3.1
204	0.001
205	3.1
206	3.1
207	3.1
208	1.6
209	3.1
210	3.18
211	0.018
212	2.2
213	3.19
214	2.69
215	1.5
216	2.9
217	2.59
218	0

MODE / PIN NO.	LEVEL(V)
219	2.29
220	2.08
221	2.29
222	2.29
223	2.49
224	3.1
225	2.39
226	2.45
227	1.5
228	0
229	1.52
230	0
231	1.61
232	1.6
233	3.1
234	1.6
235	1.6
236	1.5
237	0
238	1.6
239	1.4
240	1.5

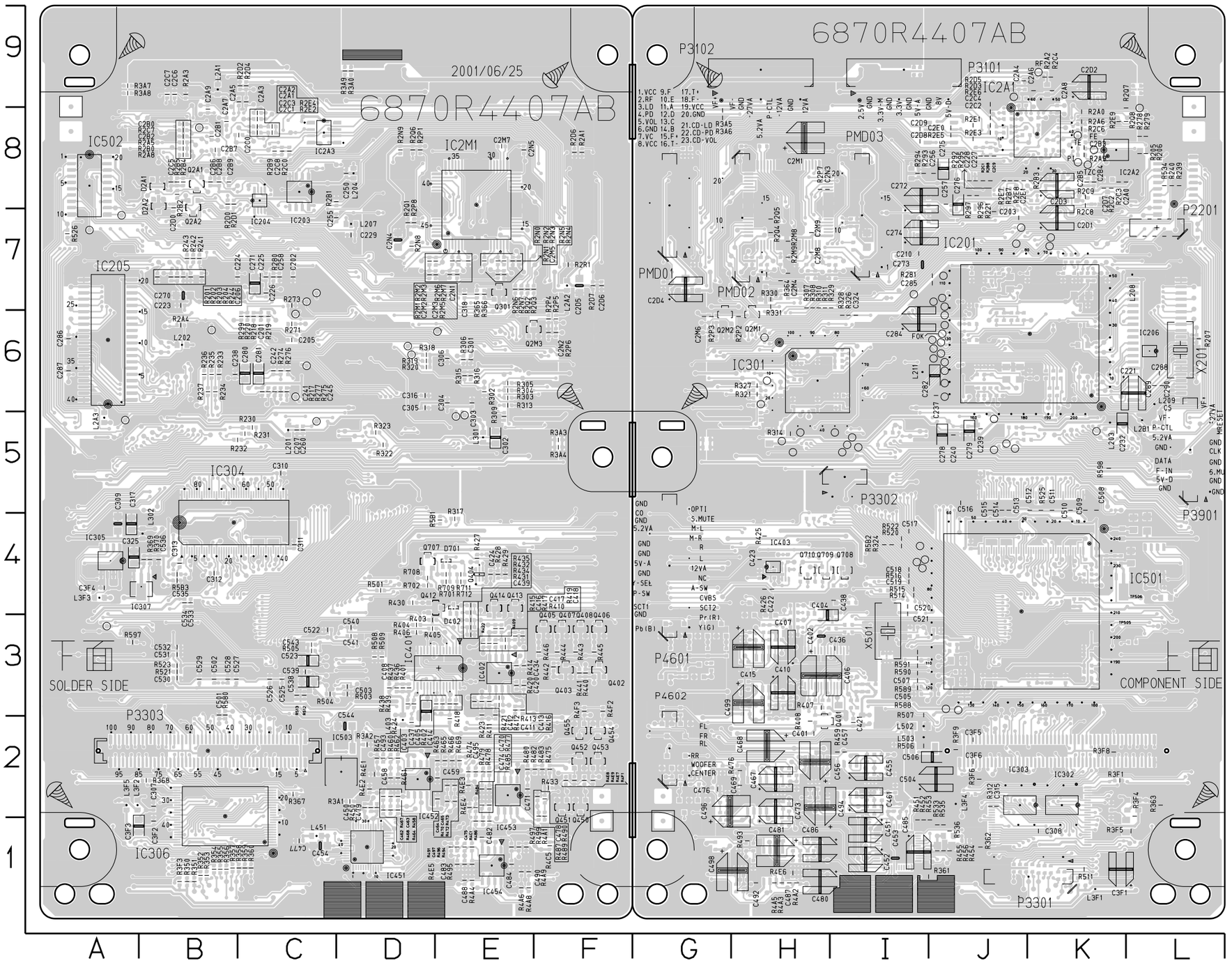
MODE / PIN NO.	EE	PLAY
164	1.40	1.40
165	3.20	0.00
166	1.60	1.75
167	0.00	0.00
168	0.00	3.10
169	0.00	3.10
170	5.00	2.50
171	0.00	2.50
172	3.10	0.00
173	3.10	3.10
174	3.10	3.10
175	3.10	3.10
176	2.53	1.30
177	4.24	4.97
178	5.00	5.00
179	2.70	0.20
180	3.26	2.30
181	3.10	2.50
182	2.40	2.50
183	3.66	2.80
184	2.40	2.50
185	0.00	0.00
186	2.26	2.00
187	3.10	3.10
188	2.20	2.40
189	1.75	1.90
190	2.20	1.80
191	1.80	1.80
192	2.20	2.20
193	1.25	1.30
194	1.00	1.10
195	5.00	5.00
196	0.00	2.25
197	0.00	1.60
198	0.00	1.50
199	0.00	1.50
200	0.00	1.50
201	0.00	1.50
202	0.00	1.50
203	0.00	1.50
204	0.00	1.50
205	3.10	2.60
206	1.50	1.50
207	3.10	3.10
208	3.10	3.10
S E R V O		
IC2A1 33P3721		
1	3.44	3.38
2	3.12	3.40
3	2.50	2.50
4	2.51	2.53
5	3.50	3.44
6	3.46	3.44
7	3.47	3.45
8	3.47	3.44

MODE / PIN NO.	EE	PLAY
9	3.48	3.44
10	3.43	3.41
11	2.52	2.70
12	2.52	2.70
13	2.52	2.60
14	2.52	2.60
15	2.56	2.70
16	2.48	2.50
17	2.98	3.30
18	0.00	0.00
19	4.50	4.58
20	0.00	0.00
21	0.00	0.20
22	4.96	3.85
23	0.00	0.00
24	4.95	4.92
25	5.00	0.00
26	2.52	2.50
27	1.55	1.55
28	4.97	4.93
29	0.00	0.40
30	2.55	2.63
31	2.51	2.56
32	4.90	4.65
33	0.00	0.20
34	0.00	2.60
35	0.00	2.50
36	1.56	2.15
37	3.58	0.00
38	2.62	3.20
39	0.00	2.60
40	2.50	2.60
41	1.55	1.60
42	1.46	1.65
43	1.58	1.64
44	2.52	2.50
45	4.92	4.97
46	4.99	5.00
47	0.00	0.00
48	0.00	0.00
49	3.59	0.00
50	0.00	0.00
51	2.35	0.00
52	2.37	2.30
53	3.51	3.47
54	3.51	3.46
55	0.61	0.00
56	1.67	2.42
57	2.95	2.88
58	4.98	4.93
59	3.48	3.40
60	3.48	3.40
61	3.71	3.70
62	3.75	3.70
63	0.27	0.36

MODE / PIN NO.	EE	PLAY
64	2.40	0.90

13. PRINTED CIRCUIT DIAGRAM

1. MAIN P.C.BOARD



LOCATION GUIDE

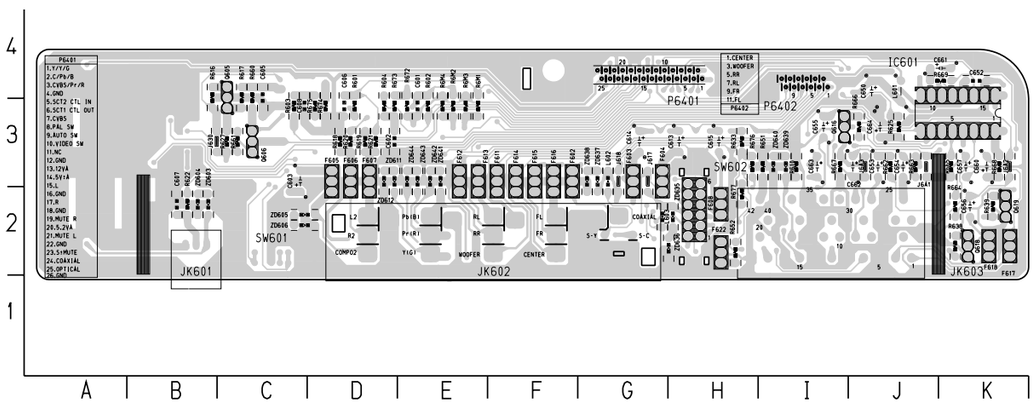
(BOTTOM SIDE)

C201	C6	C301	E6	C497	E1	L451	C1	R2A8	B8	R320	D6	R433	F2	R4C1	E1
C202	C7	C302	E5	C501	B3	P3303	B2	R2B0	B8	R322	D5	R434	E3	R4C5	F1
C205	C6	C303	E6	C502	B3	Q2A1	B8	R2B2	B8	R323	D5	R435	E4	R4E1	D2
C206	B7	C304	E6	C503	D3	Q2A2	B8	R2B4	B8	R350	B1	R436	D3	R4E2	D2
C207	C5	C305	D6	C522	C3	Q2M3	F6	R2B5	B8	R351	B1	R437	D3	R4E3	E2
C223	B7	C306	E6	C523	C3	Q301	E7	R2B8	B8	R352	B1	R438	D3	R4E4	E2
C224	C7	C307	B2	C525	C3	Q402	F3	R2B9	C8	R353	B1	R439	D3	R4E5	E1
C225	C7	C309	A4	C526	C3	Q403	F3	R2C0	C8	R354	B1	R440	F3	R4E7	F2
C226	C7	C310	C5	C527	B3	Q404	E4	R2C7	B8	R355	B1	R441	F3	R4E8	F2
C229	D7	C311	C4	C528	B3	Q405	F3	R2D0	B8	R356	B1	R442	F3	R4E9	F2
C238	B6	C312	B4	C529	B3	Q406	F3	R2D1	B8	R357	B1	R443	F3	R4F1	F2
C241	C6	C313	B4	C530	B3	Q407	F3	R2D2	C9	R358	C1	R444	F3	R4F2	F3
C242	C6	C316	D6	C531	B3	Q408	F3	R2D4	C9	R359	C1	R445	F3	R4F3	F3
C245	C6	C317	A4	C532	B3	Q412	E4	R2D6	F8	R360	C1	R446	F3	R501	D4
C250	D8	C318	E7	C533	B4	Q413	E4	R2D7	F7	R365	E7	R450	D2	R503	D3
C255	D7	C3F2	B1	C534	B4	Q414	E4	R2E2	C8	R366	E7	R457	D2	R504	C3
C258	C7	C3F3	B1	C535	B4	Q450	F2	R2E4	C8	R367	C2	R458	D2	R505	C3
C260	C5	C3F4	A4	C536	B4	Q451	F2	R2M1	D7	R368	B2	R460	D2	R508	D3
C270	B7	C403	D3	C538	C3	Q452	F2	R2M2	D7	R3A0	D9	R461	D2	R509	D3
C271	C7	C405	E3	C539	C3	Q453	F2	R2M3	E7	R3A1	D2	R462	D2	R512	C3
C280	C6	C408	D3	C540	D3	Q454	F2	R2M5	E7	R3A2	D2	R463	E2	R513	C3
C281	C6	C411	E3	C541	D3	Q455	F2	R2M6	E7	R3A3	F5	R464	D2	R521	B3
C286	A6	C412	E3	C543	C3	Q707	D4	R2M7	E7	R3A4	F5	R465	E2	R523	B3
C287	A6	C413	E3	D2A1	B8	R201	B7	R2N0	E7	R3A7	A9	R466	E2	R526	A7
C2A1	C8	C414	E3	D2A2	B8	R202	B7	R2N1	E7	R3A8	A9	R467	D2	R580	B3
C2A2	C8	C416	E3	D402	E4	R203	B7	R2N2	E7	R3A9	D9	R468	D2	R597	A3
C2A3	C9	C417	E3	D701	E4	R204	B7	R2N3	E7	R3F3	B1	R469	E2	R5B1	E4
C2A5	C9	C418	E3	IC203	C8	R217	C6	R2N4	E7	R401	D3	R470	E2	R5B3	B4
C2A7	B8	C420	E3	IC204	C8	R218	C6	R2N5	E7	R402	E3	R472	E2	R701	E4
C2A9	B8	C424	E4	IC205	A6	R219	C6	R2N6	E7	R403	D3	R473	E2	R702	D4
C2B0	B8	C434	E3	IC2A3	C8	R220	C6	R2N7	E7	R404	D3	R474	E2	R708	D4
C2B1	B8	C437	E3	IC2M1	E8	R230	C5	R2N8	D7	R405	D3	R475	F2	R709	E4
C2B2	B8	C439	E3	IC304	B4	R231	C5	R2N9	D8	R406	D3	R477	E2	R711	E4
C2B6	B8	C450	D2	IC305	A4	R232	C5	R2P1	D8	R409	E3	R478	E2	R712	E4
C2B7	B8	C454	C1	IC306	B2	R233	B6	R2P4	F6	R410	E3	R479	E2	TP206	A3
C2B8	B8	C458	D2	IC401	E3	R234	B6	R2P5	F6	R411	E3	R480	E2	TP207	C6
C2B9	B8	C459	E2	IC402	E3	R235	B6	R2P6	F6	R412	E3	R482	F2	TP208	C5
C2C0	C8	C462	D2	IC451	D1	R236	B6	R2P8	D7	R413	E3	R483	F2	TP212	C6
C2C1	C8	C463	D2	IC452	D2	R237	B6	R2P9	D7	R414	E3	R484	F2	TP218	B6
C2C3	C8	C464	E2	IC453	E2	R241	B7	R2Q2	E7	R415	E3	R485	E2	TP221	E6
C2C5	B8	C465	E2	IC454	E1	R242	B7	R2Q3	F7	R416	E3	R486	E1	TP231	C6
C2C6	B9	C470	E2	IC502	A8	R243	B7	R2Q6	D8	R417	E3	R487	F2	TP235	A5
C2C7	B8	C471	E2	L201	C5	R244	B7	R2R1	F7	R418	E3	R489	F2	TP241	C7
C2C8	C8	C474	E2	L202	B6	R271	C6	R302	E6	R419	E3	R490	F2	TP244	C7
C2D0	B8	C475	E1	L204	D8	R273	C7	R303	E6	R420	E3	R491	E1	TP2A1	B8
C2D5	F7	C477	C1	L207	D7	R274	C6	R304	E6	R421	E3	R494	E1	TP359	E5
C2D6	F7	C478	F2	L2A1	B9	R275	C6	R305	E6	R422	E3	R495	E1	TP360	D6
C2M2	E7	C479	E1	L2A2	F7	R276	C6	R306	E6	R423	E3	R496	E1	TP361	D6
C2M3	E7	C482	E1	L2A3	A5	R277	C6	R309	E5	R424	D2	R497	E1	TP362	E5
C2M5	E7	C483	E1	L301	E5	R280	C7	R313	E6	R427	E4	R499	E1	TP515	A7
C2M7	E8	C484	E1	L302	B4	R299	C8	R315	E6	R428	E4	R4A1	E1	TP516	A7
C2N1	F6	C488	E1	L303	A2	R2A1	B8	R316	E6	R429	E4	R4A4	E1		
C2N2	F6	C490	E1	L3F3	A4	R2A3	B9	R317	E4	R430	D4	R4A6	E1		
C2N4	D7	C493	D2	L3F5	A2	R2A4	B6	R318	D6	R431	E3	R4A8	E1		
C2N5	E8	C495	E2	L403	D2	R2A5	B8	R319	D6	R432	E4	R4A9	E1		

(TOP SIDE)

C203	J7	C410	H3	L3F1	K1	R2P2	H6	R533	J1
C210	I7	C415	H3	L3F4	J2	R2P3	G6	R534	L8
C221	L6	C421	I2	L502	I2	R2P7	H8	R535	J1
C227	J8	C422	H4	L503	I2	R2Q4	H7	R536	J1
C228	K8	C423	H4	P2201	L7	R2Q5	H7	R588	I3
C232	K5	C436	I3	P3101	I9	R2Q7	L8	R589	I3
C237	J6	C438	I4	P3102	H9	R2Q8	L8	R590	I3
C239	J5	C451	I1	P3301	K1	R307	H7	R591	I3
C240	J5	C452	I1	P3302	I5	R308	H7	R5B2	I4
C256	J8	C453	I1	P3901	L5	R310	H7	TP201	K5
C257	J8	C455	I2	P4601	G4	R311	H7	TP202	J5
C272	I8	C456	H2	P4602	G2	R312	J2	TP203	J5
C273	I7	C457	I2	PMD01	G8	R314	H5	TP204	J5
C274	I7	C461	I2	PMD02	F7	R321	H6	TP205	J5
C275	J8	C467	H2	PMD03	I7	R324	I4	TP209	J6
C276	J8	C468	H2	Q2M1	H6	R325	L4	TP210	J6
C278	J5	C469	H2	Q2M2	G6	R326	I6	TP211	J6
C279	J5	C473	H2	Q4201	H2	R327	H6	TP213	J6
C282	J6	C476	G2	Q708	I4	R328	I6	TP214	J6
C284	I6	C480	H1	Q709	H4	R329	I7	TP215	J6
C285	J7	C481	H1	Q710	H4	R330	H7	TP216	J6
C288	L6	C485	I1	R205	L8	R331	H7	TP219	H6
C289	L6	C486	H1	R206	L8	R332	L4	TP220	J6
C290	L6	C487	H1	R207	L6	R361	J1	TP222	K7
C2A0	L8	C492	H1	R221	J7	R362	J1	TP223	K8
C2A4	J9	C494	H2	R239	L8	R363	L2	TP224	K8
C2A6	K9	C496	G2	R240	L8	R364	H7	TP225	J6
C2A8	K9	C498	H1	R278	L8	R3A5	G8	TP226	J6
C2B3	K8	C499	H3	R279	L8	R3A6	G8	TP228	J6
C2B4	K8	C504	I2	R281	J7	R3F1	K2	TP229	J7
C2B5	K8	C505	I3	R292	J8	R3F4	L2	TP230	J7
C2C2	J8	C506	J2	R293	J8	R3F5	L1	TP232	J7
C2C4	J8	C507	I3	R294	J8	R3F6	J2	TP233	J7
C2C9	J8	C508	K5	R295	J8	R3F8	K2	TP234	J7
C2D1	K7	C509	K5	R296	J8	R3F9	J2	TP239	K7
C2D2	K9	C510	K5	R297	J8	R407	H3	TP241	J6
C2D3	K8	C511	K5	R2A0	K8	R408	H2	TP243	J7
C2D4	G7	C512	K5	R2A2	K9	R425	H4	TP245	I7
C2D7	K8	C513	J5	R2A6	K8	R426	H4	TP2A2	L8
C2D8	I8	C514	J5	R2A9	K8	R451	I1	TP2A3	K8
C2D9	I8	C515	J5	R2B3	K8	R452	I1	TP2A5	J8
C2E0	J8	C516	J5	R2B7	J8	R453	J1	TP2A6	K8
C2E1	J8	C517	I4	R2B8	J8	R454	J1	TP2A8	K9
C2M1	H8	C518	I4	R2C1	J8	R455	J1	TP301	L1
C2M4	H8	C519	I4	R2C2	K8	R456	J1	TP302	K2
C2M6	G6	C520	I4	R2C3	K8	R459	I2	TP303	J2
C2M8	H7	C521	I3	R2C4	K9	R476	H2	TP304	K1
C2M9	H7	IC201	K6	R2C6	K8	R493	H1	TP305	K2
C2N3	H8	IC206	L6	R2C8	K8	R4A2	H1	TP306	K1
C308	K1	IC2A1	K8	R2C9	K8	R4A3	H1	TP307	K2
C315	J2	IC2A2	K8	R2D3	J8	R4A5	H1	TP308	K1
C319	L4	IC301	H6	R2D5	J9	R4E6	H1	TP309	K2
C324	I6	IC302	K2	R2E1	J8	R506	I2	TP310	K1
C3F1	K1	IC303	J2	R2E3	J8	R507	I3	TP311	K2
C3F5	J2	IC403	H4	R2E5	J8	R511	K1	TP312	K2
C3F6	J2	IC501	J4	R2E6	J8	R514	I4	TP313	K2
C401	H2	L203	K5	R2E7	J8	R515	I4	TP314	K2
C402	H3	L209	L7	R2E8	J8	R516	I4	TP315	K2
C404	H3	L209	L6	R2E9	K8	R520	I4	TP316	K2
C406	H3	L211	I6	R2M8	H7	R522	I4	TP317	K2
C407	H3	L2B1	L5	R2M9	H7	R525	K5	TP318	K2

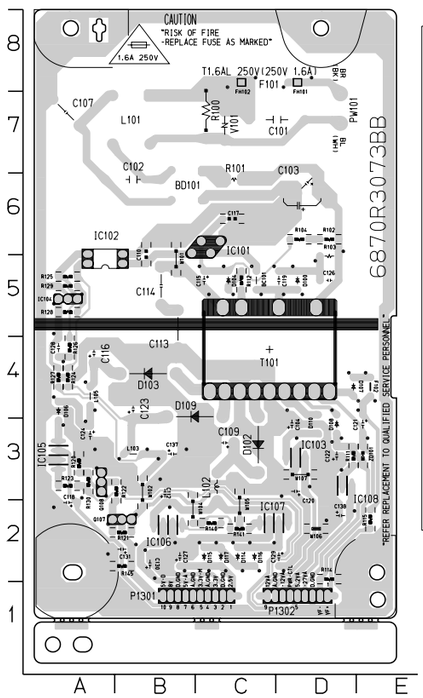
2. AV JACK P.C.BOARD



LOCATION GUIDE

C601	E3	R601	D3
C602	D3	R602	E3
C603	C3	R603	C3
C605	C4	R604	D3
C606	D3	R610	J3
C607	B2	R616	B4
C608	C3	R617	C4
C613	H3	R618	D3
C614	G3	R619	D3
C615	H3	R620	D3
C650	J4	R621	D3
C652	K4	R622	B2
C653	J3	R625	J3
C654	J3	R627	E3
C655	J3	R633	H5
C656	K2	R638	K2
C657	K3	R639	K2
C660	K3	R651	J3
C661	K4	R652	H2
C662	J3	R660	C2
C663	I3	R661	C3
C664	J3	R662	J3
F602	F3	R663	J3
F603	G3	R664	K2
F604	G3	R665	K3
F605	G3	R666	J3
F606	D3	R667	I3
F607	K3	R668	K3
F608	H2	R669	K4
F611	F3	R672	E3
F612	E3	R673	D3
F613	E3	R674	D3
F614	F3	R675	D3
F615	F3	R676	H3
F616	F3	R677	H2
F617	K2	R6M1	E3
F618	K2	R6M2	E3
F622	H2	R6M3	E3
IC601	K3	R6M4	E3
J617	G3	SW601	C2
J618	G3	SW602	B2
J630	B3	ZD603	B2
J6A1	J3	ZD604	B2
J6A2	K3	ZD605	C2
J6A3	J3	ZD606	C2
JK601	B2	ZD611	D3
JK602	F2	ZD612	D3
JK603	J2	ZD635	H2
L601	J4	ZD636	H2
L602	G3	ZD637	G3
L603	G2	ZD638	G3
P6401	H4	ZD639	I3
P6402	I4	ZD640	I3
Q605	C4	ZD641	E3
Q606	C3	ZD642	E3
Q616	I3	ZD643	E3
Q618	K2	ZD644	E3
Q619	K2		

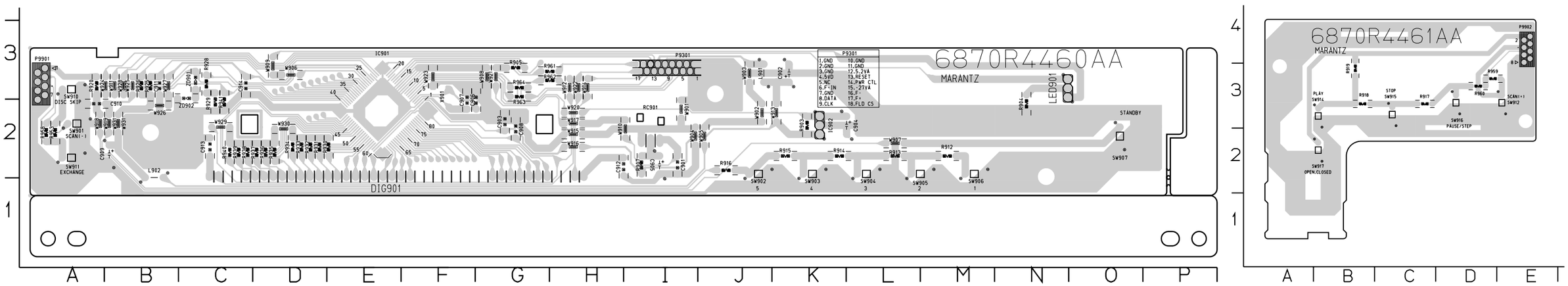
3. SMPS P.C.BOARD



LOCATION GUIDE

BC101	C5	FH102	C8
BD101	B6	IC101	C6
C101	D7	IC102	A5
C102	B6	IC103	D3
C103	D6	IC104	A5
C104	D3	IC105	A3
C107	A7	IC106	B2
C109	C3	IC107	D2
C110	B6	IC108	D3
C112	B3	L101	B7
C113	B5	L102	C3
C114	B5	L103	B3
C115	C5	L105	A4
C116	A4	P1301	C1
C117	C6	P1302	D1
C118	A2	PW101	D7
C119	D5	Q107	B2
C120	D3	Q108	A3
C121	E3	R100	C7
C122	D3	R101	C6
C123	B4	R102	D6
C124	A3	R103	D5
C126	D5	R104	D6
C127	B2	R111	D3
C128	A4	R112	C5
C129	D2	R114	D2
C130	B2	R115	E2
C131	B2	R120	A3
C137	B2	R121	B2
C138	D2	R123	D3
D100	D5	R123	A3
D102	C3	R124	A4
D103	B4	R125	A5
D104	C5	R126	A4
D106	A4	R127	A4
D107	D4	R128	A5
D108	D3	R129	A5
D109	B4	R130	A3
D110	D3	R140	C2
D114	C2	R141	C2
D115	C2	R145	B2
D116	C2	T101	C4
D117	C2	V101	C7
F102	E4	ZD101	E3
FH101	D8		

4. FRONT P.C.BOARD



14. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R✻✻✻: 1) GD05×××140, Carbon film fixed resistor, ±5% 1/4W
R✻✻✻: 2) GD05×××160, Carbon film fixed resistor, ±5% 1/6W
① —— Resistance value

Examples ;
① Resistance value
0.1 Ω .... 001 10 Ω .... 100 1 kΩ .... 102 100 kΩ 104
0.5 Ω .... 005 18 Ω .... 180 2.7 kΩ .... 272 680 kΩ 684
1 Ω .... 010 100 Ω .... 101 10 kΩ .... 103 1 MΩ 105
6.8 Ω .... 068 390 Ω .... 391 22 kΩ .... 223 4.7 MΩ 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C✻✻✻: CERAMIC CAP.
3) DD1××××370, Ceramic capacitor
② ③ Disc type
Temp.coeff.P350 ～N1000, 50V
③ —— Capacity value
② —— Tolerance

Examples ;
② Tolerance (Capacity deviation)
±0.25 pF 0
±0.5 pF 1
±5% 5
✻ Tolerance of COMMON PARTS handled here are as follows :
0.5 pF～ 5 pF .... ±0.25 pF
6 pF～ 10 pF .... ±0.5 pF
12 pF～ 560 pF .... ±5%
③ Capacity value
0.5 pF .... 005 3 pF .... 030 100 pF 101
1 pF .... 010 10 pF .... 100 220 pF 221
1.5 pF .... 015 47 pF .... 470 560 pF 561

C✻✻✻ : CERAMIC CAP.
4) DK16××× 300, High dielectric constant ceramic capacitor
④ Disc type
Temp.chara. 2B4, 50V
④ —— Capacity value

Examples ;
④ Capacity value
100 pF .... 101 1000 pF .... 102 10000 pF 103
470 pF .... 471 2200 pF 222

C✻✻✻ : 5) ELECTROLY CAP. (⏚), 6) FILM CAP. (⫩)
5) EA⑤⑥10, Electrolytic capacitor
One-way lead type, Tolerance ±20%
⑤ —— Working voltage
⑥ —— Capacity value

Examples ;
⑤ Capacity value
0.1 µF .... 104 4.7 µF .... 475 100 µF 107
0.33 µF .... 334 10 µF .... 106 330 µF 337
1 µF .... 105 22 µF .... 226 1100 µF 118
2200 µF 228
⑥ Working voltage
6.3V 006 25V 025
10V 010 35V 035
16V 016 50V 050

6) DF15××× 350 → Plastic film capacitor
DF15××× 310 One-way type, Mylar ±5% 50V
DF16××× 310 → Plastic film capacitor
One-way type, Mylar ±10% 50V
⑦ —— Capacity value

Examples ;
⑦ Capacity value
0.001 µF (1000 pF) ..... 102 0.1 µF 104
0.0018 µF ..... 182 0.56 µF 564
0.01 µF ..... 103 1 µF 105
0.015 µF 153

NOTE : 1) The above CODES (R✻✻✻ , R✻✻✻ , C✻✻✻ , C✻✻✻ and C ✻✻✻) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts (**RI05**, **DD4**, **DK4**).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows;

1. KOA Corporation

Part No. (MJI)	Type No. (KOA)	Description
NH05×××140	RF25S××××ΩJ	(±5% 1/4W)
NH05×××120	RF50S××××ΩJ	(±5% 1/2W)
NH85×××110	RF73B2A××××ΩJ	(±5% 1/10W)
NH95×××140	RF73B2E××××ΩJ	(±5% 1/4W)

✻ Resistance value — Resistance value (0.1 Ω – 10 kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No. (MJI)	Type No. (MEC)	Description
NF05×××140	ERD-2FCJ×××	(±5% 1/4W)
RF05×××140		
NF02×××140	ERD-2FCG×××	(±2% 1/4W)
RF02×××140		

✻ Resistance value — ✻ Resistance value

Examples ;
✻ Resistance value
0.1 Ω .... 001 10 Ω .... 100 1 kΩ .... 102 100 kΩ 104
0.5 Ω .... 005 18 Ω .... 180 2.7 kΩ .... 272 680 kΩ 684
1 Ω .... 010 100 Ω .... 101 10 kΩ .... 103 1 MΩ 105
6.8 Ω .... 068 390 Ω .... 391 22 kΩ .... 223 4.7 MΩ 475

ABBREVIATION AND MARKS

ANT.	: ANTENNA	BATT.	: BATTERY
CAP.	: CAPACITOR	CER.	: CERAMIC
CONN.	: CONNECTING	DIG.	: DIGITAL
HP	: HEADPHONE	MIC.	: MICROPHONE
µ-PRO	: MICROPROCESSOR	REC.	: RECORDING
RES.	: RESISTOR	SPK	: SPEAKER
SW	: SWITCH	TRANSF.	: TRANSFORMER
TRIM.	: TRIMMING	TRS.	: TRANSISTOR
VAR.	: VARIABLE	X'TAL	: CRYSTAL

NOTE ON FUSE :

Regarding to all parts of parts code **FS20**xxx**2**xx, replace only with Wickmann-Werke GmbH, Type 372 non glass type fuse.

NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意：

⚠がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

010728ACT

POS. NO	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
		CAPACITORS		
C101		624-088F	DRAWING PCX2 275V 0.1µF M	nsp
C102		624-088F	DRAWING PCX2 275V 0.1µF M	nsp
C103		0CE157CR610	ELECT 150µF 250V M	nsp
C104		624-085D	ELECT 47µF 50V (SMPS)	EA47605020
C109		0CE108BF638	ELECT 1000µF 16V M	EA10801620
C110		0CN4730K948	TUBULAR 0.047µF 50V +80% -20%	nsp
C112		0CE3376D638	ELECT 330µF 10V M	nsp
C113		0CG3320U630	CER. 3300pF 400V M (NK A S)	nsp
C115		0CE1064K638	ELECT 10µF 50V M	nsp
C116		0CE477BH638	ELECT 470µF 25V M	EA47702520
C117		0CN4730K948	TUBULAR 0.047µF 50V +80% -20%	nsp
C118		0CE1076F638	ELECT 100µF 16V M	nsp
C119		624-087B	HIGH-VOL 100pF 1KV	nsp
C120		0CE1076F638	ELECT 100µF 16V M	nsp
C121		0CE2276F638	ELECT 220µF 16V M	nsp
C122		624-085D	ELECT 47µF 50V (SMPS)	EA47605020
C123		0CE108BF638	ELECT 1000µF 16V M	EA10801620
C124		0CE337CH618	ELECT 330µF 25V M	nsp
C126		0CQ1031Y519	MYLAR 0.01µF 630V K	nsp
C127		0CE2274C638	ELECT 220µF 6.3V M	EJ22700610
C128		0CQ4732K409	MYLAR 0.047µF 50V J	nsp
C130		0CE1076F638	ELECT 100µF 16V M	nsp
C131		0CE1076F638	ELECT 100µF 16V M	nsp
C137		0CE3376D638	ELECT 330µF 10V M	nsp
C138		0CE1076F638	ELECT 100µF 16V M	nsp
C201		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C202		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C203		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C205		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C206		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C207		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C210		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C221		0CH8476C611	CHIP ELECT 47µF 6.3V M	EY47600620
C223		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C224		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C226 ⟆ C229		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C232		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C237		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C238		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C239		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C240		0CH1222K562	CHIP CER. 2200pF 50V K	nsp
C241		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C242		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C245		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C250		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C255 ⟆ C258		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C260		0CH4100K112	CHIP CER. 10pF 50V	nsp
C270		0CH1225F944	CER. 2.2µF 16V +80% -20%	nsp
C271		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C272		0CH8476C611	CHIP ELECT 47µF 6.3V M	EY47600620
C273		0CH1225F944	CER. 2.2µF 16V +80% -20%	nsp
C274		0CH8476C611	CHIP ELECT47µF 6.3V M	EY47600620
C275		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C276		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C278 ⟆ C282		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C284		0CH8476C611	CHIP ELECT 47µF 6.3V M M	EY47600620
C285		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C286		0CH4220K412	CHIP CER. 22pF 50V J M	nsp
C287		0CH4220K412	CHIP CER. 22pF 50V J	nsp

POS. NO	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
C288		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2A0		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2A1		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2A2		0CH1222K562	CHIP CER. 2200pF 50V K	nsp
C2A3 ⟆ C2A9		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2B0		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2B1		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2B2		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2B3		0CH1473H942	CHIP CER. 0.047µF 25V Z	nsp
C2B4		0CH4561K512	CHIP CER. 560pF 50V K	nsp
C2B5		0CH4561K512	CHIP CER. 560pF 50V K	nsp
C2B6		0CH1333K562	CHIP CER. 0.033µF 50V K	nsp
C2B7		0CH1333K562	CHIP CER. 0.033µF 50V K	nsp
C2B8		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2B9		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2C0		0CH4221K412	CHIP CER. 220pF 50V J	nsp
C2C1 ⟆ C2C4		0CH1222K562	CHIP CER. 2200pF 50V K	nsp
C2C5		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2C8		0CH4330K412	CHIP CER. 33pF 50V J	nsp
C2C9		0CH4330K412	CHIP CER. 33pF 50V J	nsp
C2D0		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2D1 ⟆ C2D4		0CH8476C611	CHIP ELECT 47µF 6.3V M	EY47600620
C2D5		0CH1225F944	CER. 2.2µF 16V +80% -20%	nsp
C2D6		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2D7		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2D9		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2E1		0CH1182K562	CHIP CER. 1800pF 50V K	nsp
C2M1		0CH8107F611	CHIP ELECT 100µF 16V M	EY10701660
C2M2		0CH1682K562	CHIP CER. 6800pF 50V K	nsp
C2M3		0CH1472K562	CHIP CER. 4700pF 50V K	nsp
C2M4 ⟆ C2M9		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2N1		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C2N2		0CH1103K562	CER. 0.01µF 50V K	nsp
C2N3		0CH1223K942	CHIP CER. 0.022µF 50V Z	nsp
C2N4		0CH1225F944	CER. 2.2µF 16V +80% -20%	nsp
C2N5		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C301		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C302		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C303 ⟆ C308		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C309		0CH1225F944	CER. 2.2µF 16V +80% -20%	nsp
C310 ⟆ C313		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C315		0CH4560K412	CHIP CER. 56pF 50V J	nsp
C316		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C317		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C318		0CH1103K562	CER. 0.01µF 50V K	nsp
C324		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C325		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C3F1		0CH8476C611	CHIP ELECT 47µF 6.3V M	EY47600620
C3F2		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C3F3		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C3F4		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C3F5		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C3F6		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
C401		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C402		0CH1225F944	CER. 2.2µF 16V +80% -20%	nsp
C403		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C404		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C406		0CH8477C611	CHIP ELECT 470µF 6.3V M	*EY000370R
C407		0CH8476C611	CHIP ELECT 47µF 6.3V M	EY47600620
C408		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C410		0CH8476C611	CHIP ELECT 47µF 6.3V M	EY47600620
C411		0CH1102K512	CER. 1000pF 50V K	nsp
C412		0CH4561K512	CHIP CER. 560pF 50V K	nsp
C413		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C414		0CH4680K412	CHIP CER. 68pF 50V J	nsp
C415		0CH8107F611	CHIP ELECT 100µF 16V M	EY10701660
C416		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C417		0CH1102K512	CER. 1000pF 50V K	nsp
C418		0CH1392K562	CHIP CER. 3900pF 50V K	nsp
C420		0CH1392K562	CHIP CER. 3900pF 50V K	nsp
C421		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C423		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C424		0CH1103K562	CER. 0.01µF 50V K	nsp
C434		0CH4561K512	CHIP CER. 560pF 50V K	nsp
C436				
∫		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C439				
C503		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C504		0CH8476C611	CHIP ELECT 47µF 6.3V M	EY47600620
C505		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C506		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C507				
∫		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C522				
C523		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C525				
∫		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C536				
C538		0CH7106C611	TANTAL 10µF 6.3V M	EY10600650
C540		0CH4150K412	CHIP CER. 15pF 50V J	nsp
C541		0CH4270K412	CHIP CER. 27pF 50V J	nsp
C543		0CH1104K942	CHIP CER. 0.1µF 50V Z	nsp
C544		0CH1225F944	CER. 2.2µF 16V +80% -20%	nsp
C601		0CN3920F668	TUBULA 3900pF 16V M	nsp
C603		0CE4774C638	ELECT 470µF 6.3V M	nsp
C606		0CN3920F668	TUBULA 3900pF 16V M	nsp
C613		0CE4774C638	ELECT 470µF 6.3V M	nsp
C614		0CE4774C638	ELECT 470µF 6.3V M	nsp
C615		0CE4774C638	ELECT 470µF 6.3V M	nsp
C901		0CN6810K518	TUBULA 680pF 50V K	nsp
C902		0CE4763C638	ELECT 47µF 6.3V M	nsp
C903		0CN1030F678	TUBULA 0.01µF 16V M	nsp
C904		0CE1063F638	ELECT 10µF 16V M	nsp
C905		0CE4763C638	ELECT 47µF 6.3V M	nsp
C906		0CX3300K408	TUBULA 33pF 50V J	nsp
C907		0CX3300K408	TUBULA 33pF 50V J	nsp
C909		0CE4763C638	ELECT 47µF 6.3V M	nsp
C910		0CN1030F678	TUBULA 0.01µF 16V M	nsp
C911		0CN1030F678	TUBULA 0.01µF 16V M	nsp
C912		0CN1040K948	TUBULA 0.1µF 50V +80% -20%	nsp
C913		0CN1040K948	TUBULA 0.1µF 50V +80% -20%	nsp
C914		0CN1030F678	TUBULA 0.01µF 16V M	nsp
			DIODES	
BD101		0DD160000DA	S1WBA60 (1A 600V)	*HD201400R
D100		0DD221009AA	ERA22-10 KFLB	*HD201480R
D102		0DR158220AA	1N5822 BK DO201AD 40V	*HD201590R
D103		0DR310000AA	RU3YXLF-C1 100V 2	*HD201470R
D104		0DD010009AC	EU01W (R-FORM)	*HD201390R
D106		0DR104009AB	RL104R	*HD201430R
D107		0DD010009AC	EU01W (R-FORM)	*HD201390R

POS. NO	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
D108		0DD010009AC	EU01W (R-FORM)	*HD201390R
D109		0DR158220AA	1N5822 BK O201A 40V	*HD201590R
D110		0DD010009AC	EU01W (R-FORM)	*HD201390R
D116		874-000T	WIRE	nsp
D117		874-000T	WIRE	nsp
D2A1		0DS202009CA	DAN202K SOT23 80	HZ20002210
D2A2		0DS202009CA	DAN202K SOT23 80	HZ20002210
D402		0DD120009EA	CHIP KDS120(USM)	*HZ200170R
DIG901		6302R-V103B	DIGITRON 7-BT-273GNYK	*HQ300520R
ZD101		0DZ560009CA	ZENER MTZ5.6B	*HD301830R
ZD605		0DZ562609AA	ZENER GDZJ5.6B	*HD301840R
ZD606		0DZ562609AA	ZENER GDZJ5.6B	*HD301840R
ZD611		0DZ562609AA	ZENER GDZJ5.6B	*HD301840R
ZD612		0DZ562609AA	ZENER GDZJ5.6B	*HD301840R
ZD635				
∫		0DZ562609AA	ZENER GDZJ5.6B	*HD301840R
ZD638				
ZD641				
∫		0DZ562609AA	ZENER GDZJ5.6B	*HD301840R
ZD644				
ZD901		0DZ560009CA	ZENER MTZ5.6B	*HD301830R
ZD902		0DZ560009CA	ZENER MTZ5.6B	*HD301830R
			INTEGRATED CIRCUITS	
IC101		0IPMGFA005A	IC POWER KA5M0365R-YDTU	*HC107420R
IC102		657-063A	SENSOR LTV-817B PHOTO COUPLER	*HC200090R
IC103		0IKE781200B	IC KIA7812PI 12V 1A KEC	*HC300390R
IC104		0ISS431000A	IC KA431AZ (LM431AZ)	*HC105750R
IC105		0ISS780800H	IC KA78R08 4P TO-220F BK	*HC300250R
IC106		0ISS783300A	IC KA78R33TU TO220-4L BK 3.3V	*HC300260R
IC107		0ISS783300A	IC KA78R33TU TO220-4L BK 3.3V	*HC300260R
IC108		0ISS791200A	IC KA7912 ST REGULATOR	*HC300400R
IC201		0IHY258010C	IC GDC25D801D 208 QFP BK	*HC107430R
IC203		0IJR341400C	IC NJM3414AM-TE1 3K/REEL.	HC10179090
IC204		0ISTLKE009A	IC KIC7W53FU KEC 8PIN SM8	*HC107440R
IC205		0IGL440164C	IC GLT440L16-40J4 40P SOJ	*HC106620R
IC206		GITO704000F	IC TC7W04FU	HC10382050
IC2A1		0ITI333721A	IC SSI33P3721(VECER.2) 64	*HC105760R
IC2A2		0IJR341400C	IC NJM3414AM-TE1 3K/REEL.	HC10179090
IC2M1		0IFA303100A	IC KA3031 48P QFP BK 6CH MOTOR	*HC107450R
IC301		0IXL957210B	IC XC9572XL-10TQ100C 100 QFP TRAY	*HC107460R
IC302		0ISTLFA004C	IC 74LCX573MTCX FAIRCHILD 20P	*HC700420R
IC303		0ISTLFA004C	IC 74LCX573MTCX FAIRCHILD 20P	*HC700420R
IC304		0IHY576532A	IC HY57V653220CTC-7 8 6P TSOP	*HC107470R
IC305		0IMMRCB001A	IC CAT93C56S-TE13 X'TAL	nsp
IC306		0IMMRAL005B	IC AT49BV1614-11TC ATMEL 48P	nsp
IC401		0IBB171600A	IC PCM1716E 28P SSOP TP DAC	*HC105580R
IC402		0IJR458000B	IC NJM4580M 8 DMP8 TP OP AMP	*HC105660R
IC403		GITO704000F	IC TC7W04FU	HC10382050
IC501		0INS860100A	IC NDV8601 240 VQFP BK MICOM+MPEG	*HC107560R
IC502		0IFA742440F	IC MM74HCT244SJ 20P	*HC700430R
IC503		0IPMGRH003A	IC POWER BA18BC0FP-E2 RW 3P	*HC107570R
IC901		0IMCRNE002C	IC UPD780232GC-043-8BT NEC 80	*HC107500R

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
IC902		0IKE704200B	IC KIA7042P 3P 4.2V RESET	*HC105670R
			TRANSISTORS	
Q107		0TR127309AA	KTA1273-TP-Y (KTA966A)	*HT100620R
Q108		0TR319809AC	KTC3198-TP-BL (KTC1815)	*HT300720R
Q2A1		0TR103709BB	CHIP 2SA1037K-Q	HX110371A0
Q2A2		0TR103709BB	CHIP 2SA1037K-Q	HX110371A0
Q2M1		0TR103009AA	CHIP KRC103S-T1(NC)22-22	*BA000870R
Q2M2		0TR103009AA	CHIP KRC103S-T1(NC)22-22	*BA000870R
Q2M3		0TR103009AA	CHIP KRC103S-T1(NC)22-22	*BA000870R
Q301		0TR103009AA	CHIP KRC103S-T1(NC)22-22	*BA000870R
Q401		0TR150409AC	CHIP KTA1504-GR-T1(ASG)	*HX100140R
Q402		0TR150409AC	CHIP KTA1504-GR-T1(ASG)	*HX100140R
Q403		0TR387509AC	CHIP KTC3875S-GR-T1(ALG)	*HT300740R
Q404		0TR100009BM	UMZ1N TL UM6 3K	BA30002210
Q405				
∫		0TR387509AC	CHIP KTC3875S-GR-T1(ALG)	*HT300740R
Q408				
Q412		0TR150409AC	CHIP KTA1504-GR-T1(ASG)	*HX100140R
Q413		0TR387509AC	CHIP KTC3875S-GR-T1(ALG)	*HT300740R
Q414		0TR387509AC	CHIP KTC3875S-GR-T1(ALG)	*HT300740R
			RESISTORS	
R100		0RD1504H632	1.5M Ω 1/2 W J	nsp
R101		614-007A	CEMENT 2.7Ω 2W SMPS V	nsp
R102		0RD2203F608	220k Ω 1/6 W J	nsp
R103		0RS5602K619	METAL 56k Ω 2 W J	GA05563020
R104		0RD2203F608	220k Ω 1/6 W J	nsp
R111		0RD3300F608	330 Ω 1/6 W J	nsp
R112		0RD0391F608	3.9 Ω 1/6 W J	nsp
R114		0RD1003F608	100k Ω 1/6 W J	nsp
R120		0RD4702F608	47k Ω 1/6 W J	nsp
R121		0RD1201F608	1.2k Ω 1/6 W J	nsp
R122		0RD2200F608	220 Ω 1/6 W J	nsp
R123		0RD1002F608	10k Ω 1/6 W J	nsp
R124		0RD1800F608	180 Ω 1/6 W J	nsp
R125		0RD3901F608	3.9k Ω 1/6 W J	nsp
R126		0RD1001F608	1k Ω 1/6 W J	nsp
R127		0RN3601E408	METAL 3.6k Ω 1/8 W F	nsp
R128		0RN3301E408	METAL 3.3k Ω 1/8 W F	nsp
R130		0RD1002F608	10k Ω 1/6 W J	nsp
R140		0RD1002F608	10k Ω 1/6 W J	nsp
R141		0RD1002F608	10k Ω 1/6 W J	nsp
R145		0RD4700F608	470 Ω 1/6 W J	nsp
R201				
∫		0RH0000C622	METAL CHIP 0 Ω 1 / 16 W J	nsp
R204				
R207		0RH1004C622	METAL CHIP 1M Ω 1 / 16 W J	nsp
R217		0RH0102C622	METAL CHIP 10 Ω 1 / 16 W J	nsp
R218		0RH4700C622	METAL CHIP 470 Ω 1 / 16 W J	nsp
R219		0RH1002C622	METAL CHIP 10k Ω 1 / 16 W J	nsp
R220		0RH1002C622	METAL CHIP 10k Ω 1 / 16 W J	nsp
R221		0RH1002C622	METAL CHIP 10k Ω 1 / 16 W J	nsp
R230				
∫		0RH1000C622	METAL CHIP 100 Ω 1 / 16 W J	nsp
R237				
R239				
∫		0RH0000C622	METAL CHIP 0 Ω 1 / 16 W J	nsp
R243				
R271		0RH0000C622	METAL CHIP 0 Ω 1 / 16 W J	nsp
R273		0RH0000C622	METAL CHIP 0 Ω 1 / 16 W J	nsp
R274		0RH6200C622	METAL CHIP 620 Ω 1 / 16 W J	nsp
R275		0RH9100C622	METAL CHIP 910 Ω 1 / 16 W J	nsp
R276		0RH9100C622	METAL CHIP 910 Ω 1 / 16 W J	nsp
R277		0RH1500C622	METAL CHIP 150 Ω 1 / 16 W J	nsp
R278		0RH0000C622	METAL CHIP 0 Ω 1 / 16 W J	nsp
R279		0RH0000C622	METAL CHIP 0 Ω 1 / 16 W J	nsp

POS. NO	VERS. COLOR	DESCRIPTION	PART NO. (MJI)
R280		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R281		0RH2201C622 METAL CHIP 2.2k Ω 1 / 16 W J	nsp
R292		0RH1201C622 METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R293		0RH2001C622 METAL CHIP 2k Ω 1 / 16 W J	nsp
R294		0RH1500C622 METAL CHIP 150 Ω 1 / 16 W J	nsp
R295		0RH2001C622 METAL CHIP 2k Ω 1 / 16 W J	nsp
R296		0RH1500C622 METAL CHIP 150 Ω 1 / 16 W J	nsp
R297		0RH1201C622 METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R2A0		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2A1		0RH0912C622 METAL CHIP 91 Ω 1 / 16 W J	nsp
R2A2		0RH1202C622 METAL CHIP 12k Ω 1 / 16 W J	nsp
R2A4		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R2A5		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R2A6		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2A9		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R2B1		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2B2		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R2B3		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2B4		0RH0182C622 METAL CHIP 18 Ω 1 / 16 W J	nsp
R2B5		0RH0182C622 METAL CHIP 18 Ω 1 / 16 W J	nsp
R2B7		0RH6801C622 METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R2B8		0RH1503C622 METAL CHIP 150k Ω 1 / 16 W J	nsp
R2B9		0RH1503C622 METAL CHIP 150k Ω 1 / 16 W J	nsp
R2C0		0RH3902C622 METAL CHIP 39k Ω 1 / 16 W J	nsp
R2C1		0RH3902C622 METAL CHIP 39k Ω 1 / 16 W J	nsp
R2C2		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2C3		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2C4		0RH1000C622 METAL CHIP 100 Ω 1 / 16 W J	nsp
R2C6		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R2C7		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R2C8		0RH0182C622 METAL CHIP 18 Ω 1 / 16 W J	nsp
R2C9		0RH0182C622 METAL CHIP 18 Ω 1 / 16 W J	nsp
R20		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R21		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R24		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R25		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R26		0RH0912C622 METAL CHIP 91 Ω 1 / 16 W J	nsp
R27		0RH0471C622 METAL CHIP 4.7 Ω 1 / 16 W J	nsp
R2E6		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R2E7		0RH6801C622 METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R2E8		0RH1802C622 METAL CHIP 18k Ω 1 / 16 W J	nsp
R2E9		0RH5601C622 METAL CHIP 5.6k Ω 1 / 16 W J	nsp
R2M1		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2M2		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2M3		0RH7501C622 METAL CHIP 7.5k Ω 1 / 16 W J	nsp
R2M5		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2M6		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2M7		0RH5601C622 METAL CHIP 5.6k Ω 1 / 16 W J	nsp
R2M8		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2M9		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2N0		0RH1202C622 METAL CHIP 12k Ω 1 / 16 W J	nsp
R2N1		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2N2		0RH5601C622 METAL CHIP 5.6k Ω 1 / 16 W J	nsp
R2N3		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2N4		0RH1502C622 METAL CHIP 15k Ω 1 / 16 W J	nsp
R2N5		0RH1202C622 METAL CHIP 12k Ω 1 / 16 W J	nsp
R2N6		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2N7		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2N8		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2N9		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2P1		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2P2		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2P3		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2P4		0RH1802C622 METAL CHIP 18k Ω 1 / 16 W J	nsp
R2P5		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2P6		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	DESCRIPTION	PART NO. (MJI)
R2P7		0RH2202C622 METAL CHIP 22k Ω 1 / 16 W J	nsp
R2P8		0RH1201C622 METAL CHIP1.2k Ω 1 / 16 W J	nsp
R2Q1		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2Q2		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2Q3		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R2Q4		0RH1502C622 METAL CHIP 15k Ω 1 / 16 W J	nsp
R2Q5		0RH1202C622 METAL CHIP 12k Ω 1 / 16 W J	nsp
R2Q6		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R2Q7		0RH6801C622 METAL CHIP6.8k Ω 1 / 16 W J	nsp
R2Q8		0RH3301C622 METAL CHIP3.3k Ω 1 / 16 W J	nsp
R2R1		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R302			
∫		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R306			
R307		0RH5600C622 METAL CHIP 560 Ω 1 / 16 W J	nsp
R308		0RH5600C622 METAL CHIP 560 Ω 1 / 16 W J	nsp
R309		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R310		0RH5600C622 METAL CHIP 560 Ω 1 / 16 W J	nsp
R311		0RH5600C622 METAL CHIP 560 Ω 1 / 16 W J	nsp
R314		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R315		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R316		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R317		0RH3901C622 METAL CHIP 3.9k Ω 1 / 16 W J	nsp
R321		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R323		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R326		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R327		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R328			
∫		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R331			
R351			
∫		0RH1000C622 METAL CHIP 100 Ω 1 / 16 W J	nsp
R363			
R364		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R365		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R366		0RH1502C622 METAL CHIP 15k Ω 1 / 16 W J	nsp
R369		0RH3301C622 METAL CHIP3.3k Ω 1 / 16 W J	nsp
R3A0			
∫		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R3A9			
R3F1		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R3F3		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R3F4		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R3F5		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R3F9		0RH1501C622 METAL CHIP1.5k Ω 1 / 16 W J	nsp
R401		0RH0102C622 METAL CHIP 10 Ω 1 / 16 W J	nsp
R402		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R403			
∫		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R406			
R407		0RH5601C622 METAL CHIP5.6k Ω 1 / 16 W J	nsp
R408		0RH2201C622 METAL CHIP2.2k Ω 1 / 16 W J	nsp
R409		0RH1801C622 METAL CHIP1.8k Ω 1 / 16 W J	nsp
R410		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R411		0RH1801C622 METAL CHIP1.8k Ω 1 / 16 W J	nsp
R412		0RH7501C622 METAL CHIP7.5k Ω 1 / 16 W J	nsp
R413		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R414		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R415		0RH0102C622 METAL CHIP 10 Ω 1 / 16 W J	nsp
R416		0RH0102C622 METAL CHIP 10 Ω 1 / 16 W J	nsp
R417		0RH7501C622 METAL CHIP7.5k Ω 1 / 16 W J	nsp
R418		0RH0102C622 METAL CHIP 10 Ω 1 / 16 W J	nsp
R419		0RH4700C622 METAL CHIP 470 Ω 1 / 16 W J	nsp
R420		0RH4700C622 METAL CHIP 470 Ω 1 / 16 W J	nsp
R421		0RH4701C622 METAL CHIP4.7k Ω 1 / 16 W J	nsp
R422		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R423		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp

POS. NO	VERS. COLOR	DESCRIPTION	PART NO. (MJI)
R424		0RH0102C622 METAL CHIP 10 Ω 1 / 16 W J	nsp
R425		0RH3300C622 METAL CHIP 330 Ω 1 / 16 W J	nsp
R426		0RH2200C622 METAL CHIP 220 Ω 1 / 16 W J	nsp
R427		0RH3300C622 METAL CHIP 330 Ω 1 / 16 W J	nsp
R428		0RH2200C622 METAL CHIP 220 Ω 1 / 16 W J	nsp
R429		0RH0752C622 METAL CHIP 75 Ω 1 / 16 W J	nsp
R430		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R431		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R432		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R433		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R434		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R435		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R439		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R440		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R441		0RH2201C622 METAL CHIP2.2k Ω 1 / 16 W J	nsp
R442			
∫		0RH1001C622 METAL CHIP 1k Ω 1 / 16 W J	nsp
R446			
R503		0RH1500C422 METAL CHIP 150 Ω 1 / 16 W F	nsp
R504		0RH1001C422 METAL CHIP 1k Ω 1 / 16 W F	nsp
R505		0RH0102C622 METAL CHIP 10 Ω 1 / 16 W J	nsp
R506			
∫		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R509			
R511		0RH3301C622 METAL CHIP3.3k Ω 1 / 16 W J	nsp
R512		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R513		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R514		0RH0222C622 METAL CHIP 22 Ω 1 / 16 W J	nsp
R515		0RH0222C622 METAL CHIP 22 Ω 1 / 16 W J	nsp
R516		0RH3300C622 METAL CHIP 330 Ω 1 / 16 W J	nsp
R520		0RH0222C622 METAL CHIP 22 Ω 1 / 16 W J	nsp
R522		0RH0222C622 METAL CHIP 22 Ω 1 / 16 W J	nsp
R525		0LC0233002B INDUCTOR CHIP HB-1S-800JT	nsp
R533		0RH0222C622 METAL CHIP 22 Ω 1 / 16 W J	nsp
R534		0RH1002C622 METAL CHIP 10k Ω 1 / 16 W J	nsp
R535		0RH0222C622 METAL CHIP 22 Ω 1 / 16 W J	nsp
R536		0RH0222C622 METAL CHIP 22 Ω 1 / 16 W J	nsp
R580		0RH0222C622 METAL CHIP 22 Ω 1 / 16 W J	nsp
R588			
∫		0RH0752C622 METAL CHIP 75 Ω 1 / 16 W J	nsp
R591			
R597		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R5B1		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R5B2		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R5B3		0RH0000C622 METAL CHIP 0 Ω 1 / 16 W J	nsp
R601		0RD1000F608 100 Ω 1/6 W J	nsp
R602		0RD1000F608 100 Ω 1/6 W J	nsp
R618		0RD1003F608 100k Ω 1/6 W J	nsp
R619		0RD1003F608 100k Ω 1/6 W J	nsp
R620		0RD2200F608 220 Ω 1/6 W J	nsp
R621		0RD2200F608 220 Ω 1/6 W J	nsp
R622		0RD0222F608 22 Ω 1/6 W J	nsp
R633		0RD4701F608 4.7k Ω 1/6 W J	nsp
R677		0RD1001F608 1k Ω 1/6 W J	nsp
R6M1		0RD2200F608 220 Ω 1/6 W J	nsp
R6M2		0RD2200F608 220 Ω 1/6 W J	nsp
R6M3		0RD1003F608 100k Ω 1/6 W J	nsp
R6M4		0RD1003F608 100k Ω 1/6 W J	nsp
R903		0RD3301F608 3.3k Ω 1/6 W J	nsp
R904		0RD1000F608 100 Ω 1/6 W J	nsp
R905		0RD1001F608 1k Ω 1/6 W J	nsp
R907		0RD3300F608 330 Ω 1/6 W J	nsp
R912		0RD2201F608 2.2k Ω 1/6 W J	nsp
R913		0RD1501F608 1.5k Ω 1/6 W J	nsp
R914		0RD1201F608 1.2k Ω 1/6 W J	nsp
R915		0RD8200F608 820 Ω 1/6 W J	nsp
R916		0RD6800F608 680 Ω 1/6 W J	nsp

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
R917		0RD1501F608	1.5k Ω 1/6 W J	nsp
R918		0RD1201F608	1.2k Ω 1/6 W J	nsp
R919		0RD8200F608	820 Ω 1/6 W J	nsp
R920		0RD6800F608	680 Ω 1/6 W J	nsp
R925		0RD1002F608	10k Ω 1/6 W J	nsp
R926		0RD1002F608	10k Ω 1/6 W J	nsp
R928		0RD1002F608	10k Ω 1/6 W J	nsp
R929		0RD4702F608	47k Ω 1/6 W J	nsp
R941		0RD4701F608	4.7k Ω 1/6 W J	nsp
R953		0RD8201F608	8.2k Ω 1/6 W J	nsp
R958		0RD4701F608	4.7k Ω 1/6 W J	nsp
R959		0RD3301F608	3.3k Ω 1/6 W J	nsp
R960		0RD2201F608	2.2k Ω 1/6 W J	nsp
R961		0RD3301F608	3.3k Ω 1/6 W J	nsp
R962		0RD3301F608	3.3k Ω 1/6 W J	nsp
R963		0RD3301F608	3.3k Ω 1/6 W J	nsp
R964		0RD3301F608	3.3k Ω 1/6 W J	nsp
		MISCELLANEOUS		
BC101		636-004C	COIL BEAD CORE BFS3550R2FD8	*FC900210R
F101		585-027B	FUSE 1600MA 250 V 5.2X20	*FS000730R
F102		0IRH100000B	IC RW ICP-N10 T104	FU40115020
F602 ∫ F608		6200HJC901A	FILTER CFI06B1H101MF	nsp
F612		6200HJC901A	FILTER CFI06B1H101MF	nsp
F613		6200HJC901A	FILTER CFI06B1H101MF	nsp
FH101		586-008B	HOLDER FUSE CLIP	nsp
FH102		586-008B	HOLDER FUSE CLIP	nsp
JK601		6612R-L007A	JACK FIBER OPTIC GP1FA550TZ SHARP VE	*YJ002520R
JK602		6612R-C006G	JACK RCA RCA DIN-11G YUQIU D.GND	*YT002660R
L101		616-145H	FILTER SHT LFS2020V4-04350	*FN000110R
L102		633-088D	COIL CHOKE 20UH LEAD CUT	nsp
L103		633-088G	COIL CHOKE 22mH TP 5MM	nsp
L105		633-088G	COIL CHOKE 22mH TP 5MM	nsp
L201 ∫ L204		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L207		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L208		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L211		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L2A1		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L2A2		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L2A3		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L301		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L302		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L3F2 ∫ L3F5		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L403		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L502		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L503		6200HJC102A	FILTER HB-1M2012-102JT	nsp
L602		0LA0101K018	INDUCTOR 1.0M K 2.3X3.4 L5 TP	nsp
L603		0LA0101K018	INDUCTOR 1.0M K 2.3X3.4 L5 TP	nsp
L901		0LR1000K035	INDUCTOR 100UF K 6X6 L5 TP	nsp
L902		0LR1000K035	INDUCTOR 100UF K 6X6 L5 TP	nsp
LED901		0DL325319AA	LED SPR325MVWT31 GREEN/RED	*HI100860R
P1301		563-602W	CONN. GIL-S/9072ST 10 PIN	nsp
P1302		6631R-E009C	CONN. GIL-S/9073ST 9 PIN	nsp

POS. NO	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
P3101		6630R3S006C	CONN. GT200 LG CABLE 10PIN	nsp
P3102		6630R3S006E	CONN. GT200 LG CABLE 9PIN	nsp
P3301		6630HXC115A	CONN. 04-6232-115-008-800	nsp
P3302		6630R-FB02F	CONN. 04-6232-106-008-800 6PIN	nsp
P3901		6630R-FB02R	CONN. 04-6232-118-008-800 18PIN	nsp
P4601		6630HXC126A	CONN. 04-6232-126-008-800 26PIN	nsp
P6401		6630HXD126A	CONN. GF102-26S-TS 26PIN	nsp
P9301		6630R-FB10R	CONN. 00-6232-018-006-800 18PIN	nsp
P9901		6630S-BC02H	CONN. B TO B P=1.25 8 PIN53045-081	nsp
P9901		6850R-GR26Z	CABLE FLAT P=1.0 FFC UL2896(0.05X0.65) 18	nsp
P9902		6630S-BC01H	CONN. B TO B P=1.25 8 PIN52061-081	nsp
PBK00		6871R-4461A	PWB(PCB) ASSYTOTAL MM4021N KEY ASSY	nsp
PBT00		6871R-4460A	PWB(PCB) ASSYTOTAL MM4021N KEY ASSY	nsp
PMD02		6630R-FB02W	CONN. 04-6232-123-008-800 23PIN	nsp
PMD03		6630HXC122A	CONN. 04-6232-122-008-800 22PIN	nsp
PW101		561-292B	CONN. GP390 LGC 3P	nsp
RC901		6712R1636G1	IR RECEIVER TSOP2836RF1	*HW100540R
SW602		6600R-SH18A	SW TACT CSS-4206	*SS000730R
SW901 ∫ SW907		556-219B	SW TACT THVV502GAA	*SP001000R
SW910		556-219B	SW TACT THVV502GAA	*SP001000R
SW911		556-219B	SW TACT THVV502GAA	*SP001000R
SW912		556-219B	SW TACT THVV502GAA	*SP001000R
SW914 ∫ SW917		556-219B	SW TACT THVV502GAA	*SP001000R
T101		642-024E	MAINS TRANSF. SJE-024E	*TS001590R
V101		656-004C	VARISTOR SVC681D-10A	nsp
X201		6202R-BM01A	X'TAL CHIP 33.8688MHz	*JX000850R
X501		6202R-BL01A	X'TAL CHIP 27MHz	*JX000660R
X901		6202R-BJ01A	X'TAL 5.0000MHz	*JX000860R

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

15. DVD DECK MECHANISM SECTION

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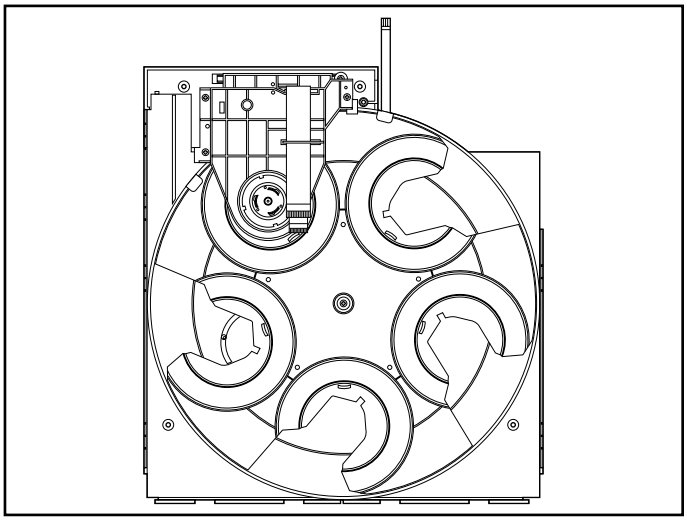
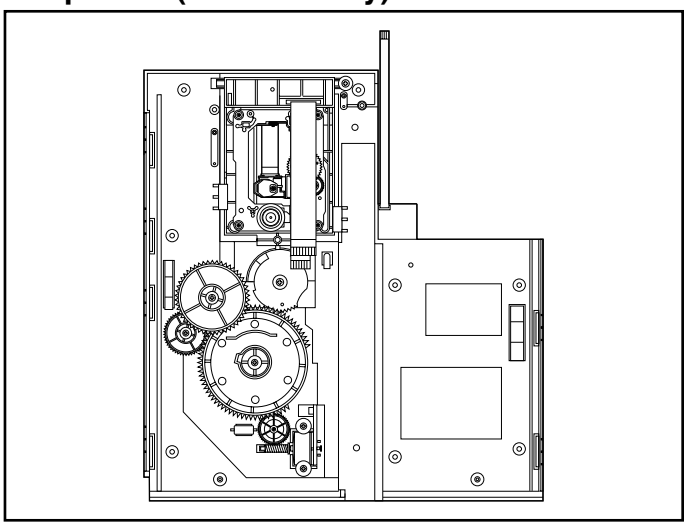
DECK MECHANISM PARTS LOCATION

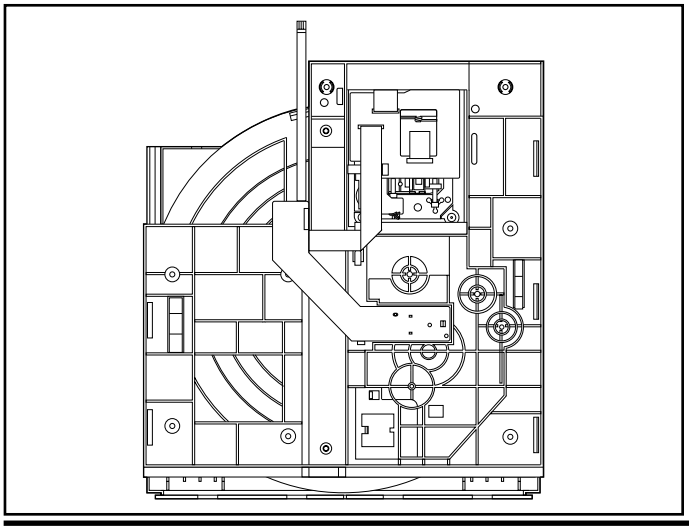
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure Starting No.		Parts	Fixing Type	Disassembly	Figure
	1	Holder Assembly Clamp	3 Screws 2 Connectors 1 Hook	Top	4-1
1	2	Plate Calmp		Top	4-1
1,2	3	Magnet Clamp		Top	4-1
1,2,3	4	Upper Clamp		Top	4-1
1,2,3,4	5	Holder Clamp		Top	4-1
	6	Base Assembly Tray	2 Locking Tabs	Top	4-2
	7	Tray Disc	1 Screw	Top	4-2
6	8	Roller Base Tray	2 Locking Tabs	Bottom	4-2
6	9	PCB Assembly Tray	2 Screws 1 Connector	Bottom	4-2
6,7	10	Motor Assembly Tray	2 Screws	Top	4-2
6,7,10	11	Gear Tray		Top	4-2
6,7,10,11	12	Gear Wheel Tray		Top	4-2
6,7,8,9,10,11,12	13	Base Tray		Top	4-2
1	14	Frame Assemly Up/Down	1 Screw	Top	4-3
	15	PCB Assembly Junction	2 Screws 5 Connectors	Bottom	4-3
1	16	Base Assembly Sled Damper	4 Screws 1 Connector	Top	4-3
1	17	Gear Assembly Feed	1 Locking Tab	Top	4-3
1,17	18	Gear Middle		Top	4-3
1,17	19	Gear Assembly Rack	1 Screw	Top	4-3
1	20	Rubber Damper		Top	4-3
1,15,16,17,18,19,20	21	Frame Up/Down		Top	4-3
1,14	22	Base Assembly Main		Top	4-4
	23	PCB Assembly Main Mode	2 Connectors 3 Screws	Bottom	4-4
6	24	Gear Slider	1 Screw	Top	4-4
6,24	25	Gear Exchange	1 Screw	Top	4-4
6,24	26	Gear Main	1 Screw	Top	4-4
6,24,26	27	Gear Up/Down	1 Screw	Top	4-4
6,24,26	28	Gear Wheel Main	1 Screw	Top	4-4
6,24,26,28	29	Gear Loading		Top	4-4
6,28	30	Motor Assembly Main	2 Screws 1 Locking Tab	Top	4-4
1,6,14,23,24,25,26,27,28,29,30	31	Base Main		Top	4-4

Note

When reassembling, perform the procedure in reverse order.

The “Bottom” on Disassembly column of above Table indicates the part should be disassembled at the Bottom side.

DECK MECHANISM DISASSEMBLY

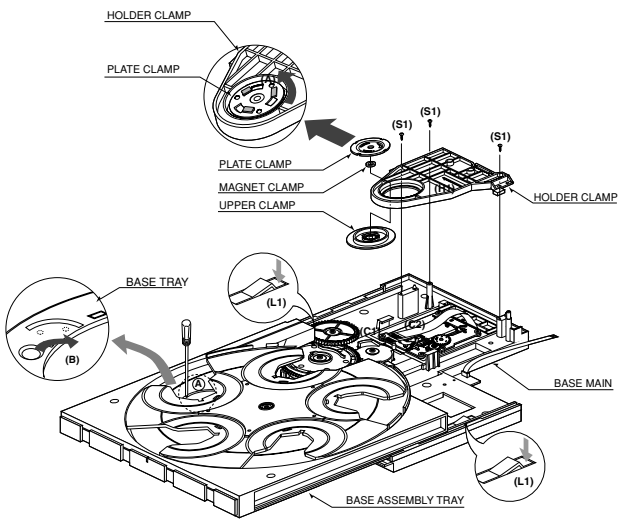


Fig. 4-1

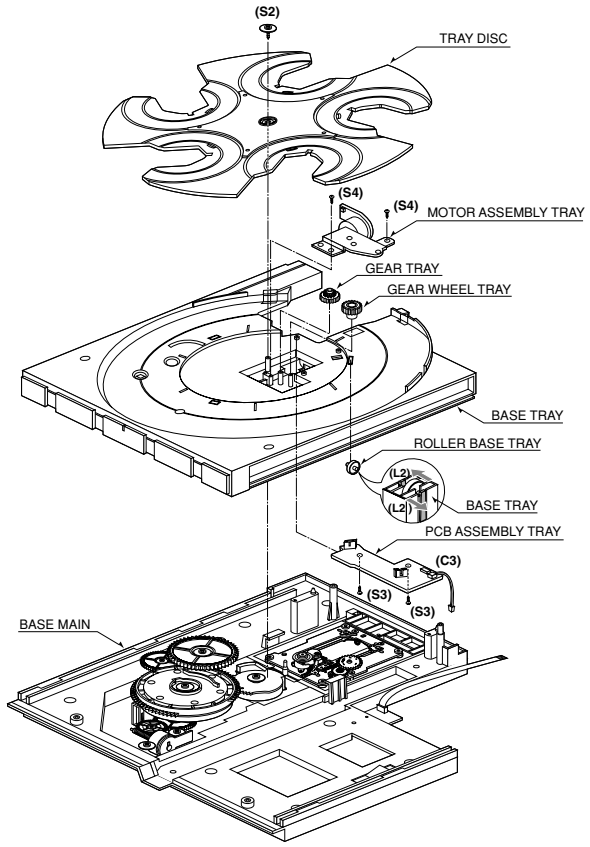


Fig. 4-2

1. Holder Assembly Clamp(Fig. 4-1)

1) Release 3 Screws(S1).
2) Unlock The Connectors (C1), (C2) from the Hook(H1).

1-1. Plate Clamp

1) Hold and fix the Upper Clamp under the Holder Assembly Clamp, and then turn the Plate Clamp to the counterclockwise direction(arrow(A)).

1-2. Magnet Clamp

1-3. Upper Clamp

1-4. Holder Clamp

Note

- When reassembling, hold and fix the Upper Clamp as above No. 1-1(1), and then turn the Plate Clamp to the clockwise direction.

2. Base Assembly Tray(Fig. 4-1)

1) Turn the Ⓐ portion to the direction of arrow(B) to move the Base Assembly Tray in front of you.
2) Push down two Locking Tabs(L1) located to both sides of the Base Main, and then pull the Base Assembly Tray in fornt of you.

2-1. Tray Disc(Fig.4-2)

1) Release Screw(S2).

Note

- Put the Base Assembly Tray face down(Bottom side).

2-2. Roller Base Tray

1) Unlock the two Locking Tabs(L2).

2-3. PCB Assembly Tray

1) Release two Screws(S3).
2) Unconnect the Connector(C3).

Note

- Put the Base Assembly Tray on original position(Top Side).

2-4. Motor Assembly Tray

1) Release 2 Screws(S4).

2-5. Gear Tray

2-6. Gear Wheel Tray

2-7. Base Tray

DECK MECHANISM DISASSEMBLY

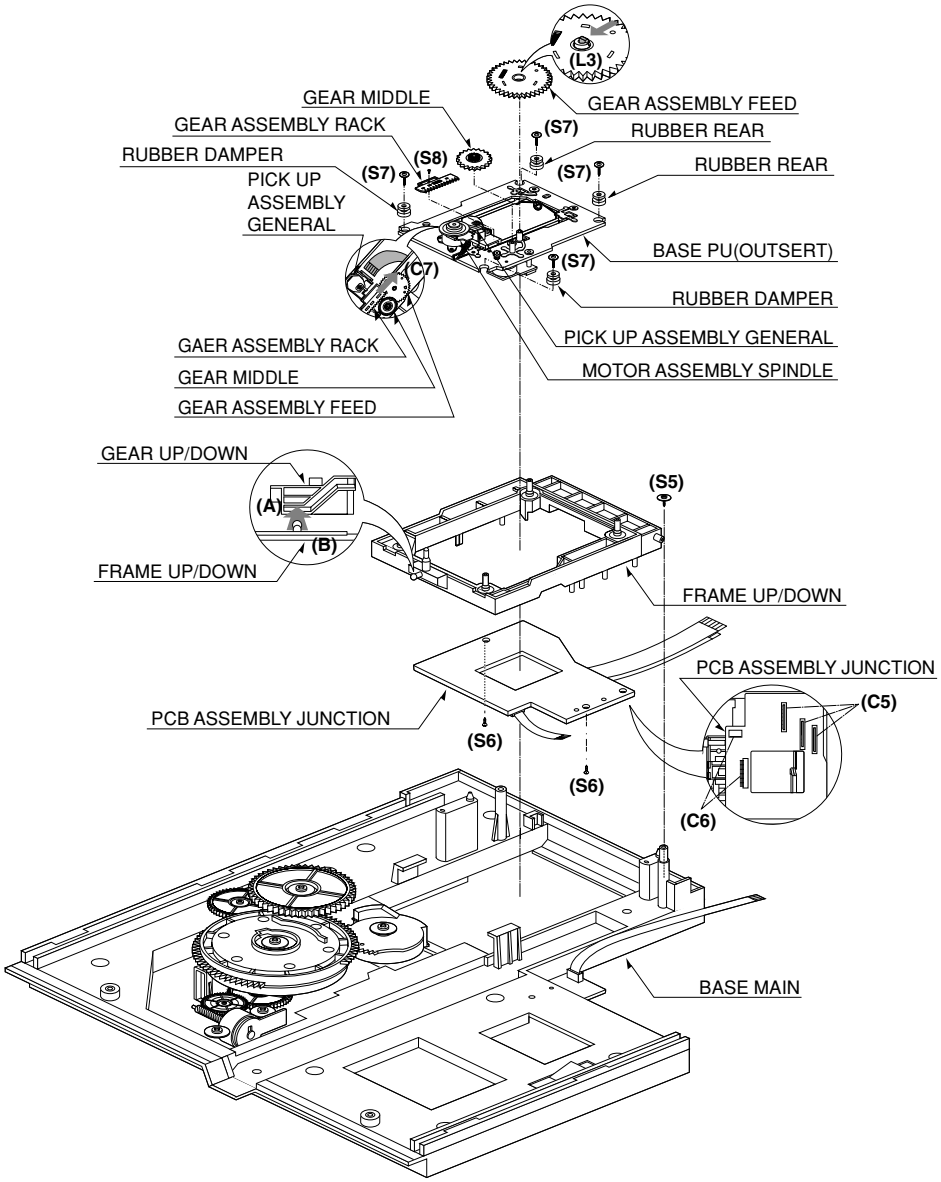


Fig. 4-3

3. Frame Assembly Up/Down(Fig. 4-3)

1) Release Screw(S5).

3-1. PCB Assembly Junction

1) Unconnect the 5 Connectors(C5), (C6).
2) Release 2 Screws(S6).

3-2. Base Assembly Sled Damper

Note

• Put the Base Assembly Main on original position(Top side)

1) Release 4 Screws(S7).
2) Disconnect the Connector(C7).

3-2-1. Gear Assembly Feed

1) Look the Locking Tab(L3) in direction of arrow.

3-2-2. Gear Assembly Middle

3-2-3. Gear Assembly Rack

1) Release the Screw(S8).

3-3. Rubber Damper

3-4. Frame Up/Down

DECK MECHANISM DISASSEMBLY

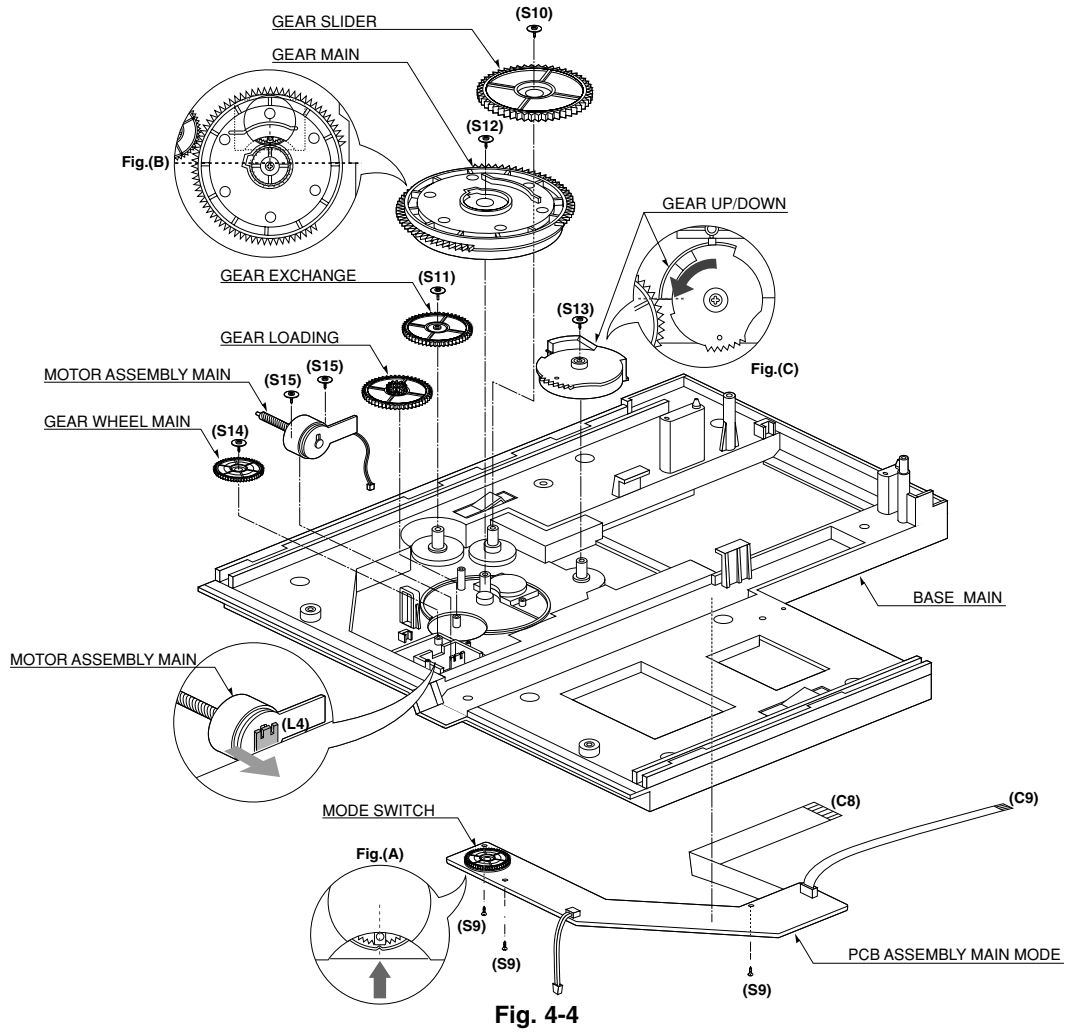


Fig. 4-4

4. Base Assembly Main(Fig. 4-4)

Note

- Put the Base Assembly Main face down(Bottom Side).

4-1. PCB Assembly Main Mode

1) Unconnect the Connectors (C8), (C9).
2) Release three Screws(S9).

Note

- When reassembling, align the Mode Switch position as Fig.(A).
- Put the Base Assembly Main on original position(Top Side)

4-2. Gear Slider

1) Release Screw(S10).

4-3. Gear Exchange

1) Release Screw(S11).

4-4. Gear Main

1) Release Screw(S12).

Note

- When reassembling, align the (A) position of the Gear Main to the (B) position of Mode Switch as Fig.(B)

4-5. Gear Up/Down

1) Release Screw(S13).

Note

- Reassembling, turn the Gear Up/Down in direction of arrow as Fig.(C).

4-6. Gear Wheel Main

1) Release Screw(S14).

4-7. Gear Loading

4-8. Motor Assembly Main

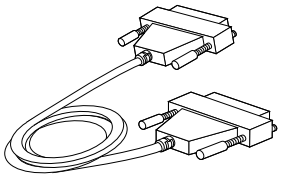
1) Release 2 Screws(S15).
2) Unlock the Locking Tab(L4).

4-9. Base Main

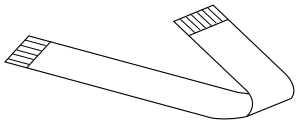
DECK MECHANISM ADJUSTMENT

1. Tools and Fixtures for SVC

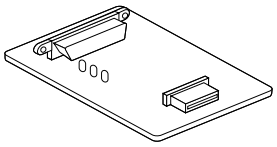
• For SVC Program Down-Load



Not spare parts
Fig.1. Printer Cable



Included in <Jig board>
Fig.2. FFC Cable (15 pin)



PART NO.*DV3100JIG
Fig.3. Jig Board

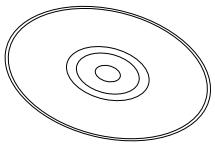
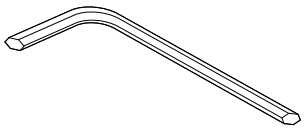
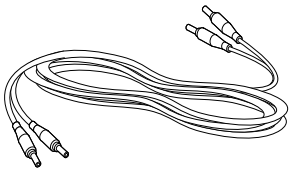


Fig.4. Deviation Disc (0.8mm)

• For T-Skew and R-Skew Adjustment



Not spare parts
Fig.5. L-Wrench(3mm)



Not spare parts
Fig.6. RCA Jack

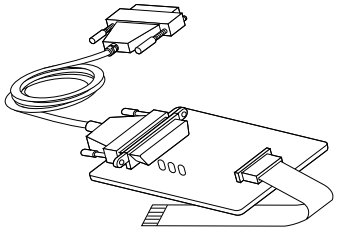


Fig.7. Connecting Method

2. Install Process

1. Connect Fig. 1, 2, 3 as Fig. 7.
2. Plug out the Power cord of DVD set.
3. Connect FFC Cable(Fig.2) to the Connector on DVD Set(Fig.8)
4. Connect Printer Cable(Fig.1) to the P.C.Printer Port (LPT1).
5. Plug in the DVD Power cord.
6. Press the Menu key on Remocon.
7. Confirm No.1 LED(RED Color) of Jig board is ON. (Fig.9)
8. Perform The S/W for Down-load at P.C.
9. Open the Program File for Adjusting(Fig.10)
10. Click the Down-load Icon and perform Program Down-load.
11. Displayed remaining time.
12. Confirm LED No.1(RED) and No.2(RED) is ON.
13. Plug out the DVD Set Power cord.
14. Disconnect the FFC Cable.

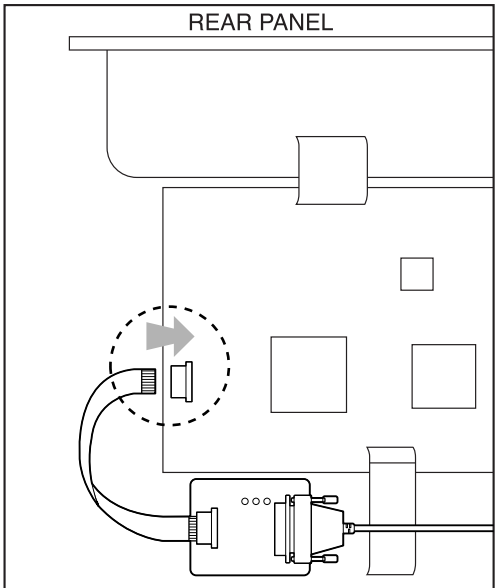


Fig.8. FFC Cable Connecting

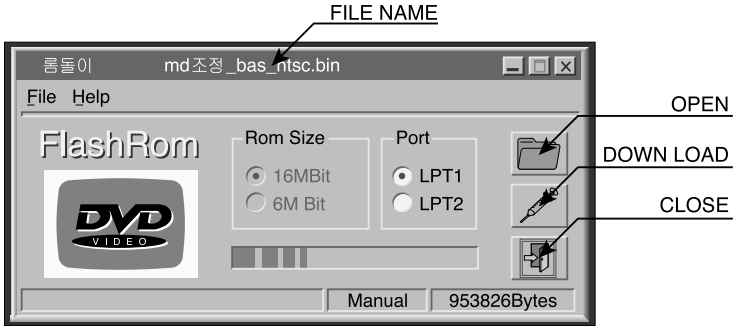


Fig.10. Adjusting Program File Open

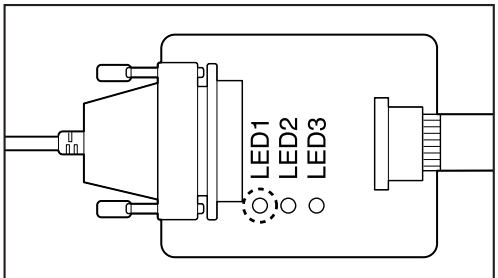


Fig.9. Jig Board LED Condition

DECK MECHANISM ADJUSTMENT

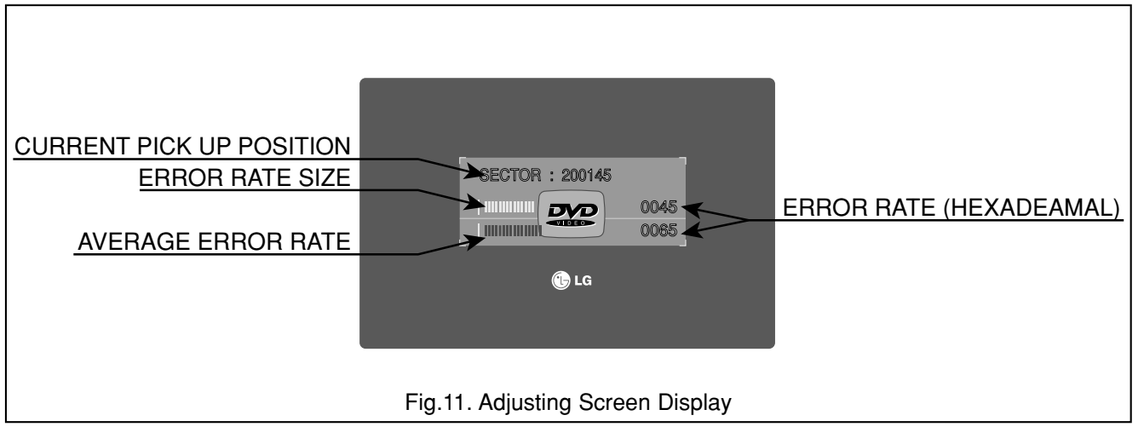


Fig.11. Adjusting Screen Display

3. Adjustment Procedure

1. Insert Disc(Only Open/Close Key Pressing)
2. Wait Until the Sector Display is about 200,000 (Fig.11)
3. Adjust R-Skew adjusting Point until the Error rate has Minimum rate with L-wrench (3mm).
4. Adjust T-Skew Adjusting Point until the Error rate has Minimum rate.
5. Repeat No. 3, 4 adjusting procedure until the Error rate have Minimum rate.
6. Error rate; SVC-3561 (ABEX) Disc=below 30 and TDV-533 (ABEX) Disc=below 100. If not, Please confirm Play ability on screen.

You can watch the screen when pressing the Stop key after the Adjusting is finished, Then perform Play and Scan/Skip operation at Chapter1 and Chapter16 and confirm screen condition, normal or abnormal.

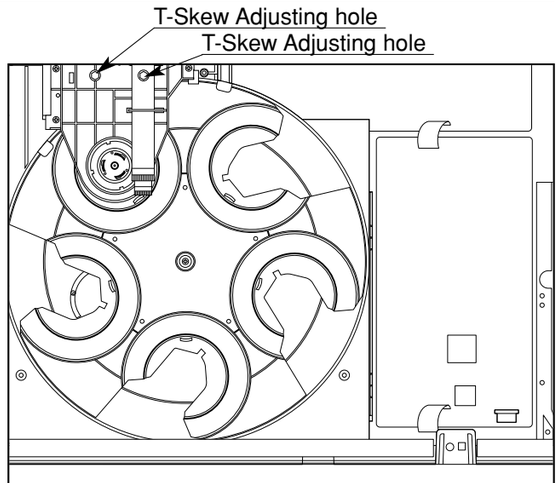


Fig.12. Adjusting Method

M E M O

EXPLODED VIEWS

1. Deck Mechanism Exploded View and Parts list

POS. NO.	VERS. COLOR	DESCRIPTION		PART NO. (MJI)
A01		4931R-0037A	HOLDER ASSY CLAMP	346W005510
A02		3041R-0014B	BASE ASSY TRAY (DPM1)	346W163510
A03		3041R-0022B	BASE ASSY SLED-DAMPER	346W304510
A04		3041R-0016A	BASE ASSY MAIN	346W304520
001		3300R-0547A	PLATE CLAMP	nsp
002		5016H-1016B	MAGNET CLAMP	nsp
003		4860R-0009A	CLAMP UPPER	nsp
004		4930R-0197A	HOLDER CLAMP	346W005010
008		4470R-0047A	GEAR ASSY RACK	304W058010
009		4470R-0053A	GEAR MIDDLE	304W058020
011		3210R-0041A	FRAME UP/DOWN	346W401010
012		5040R-0047D	RUBBER DAMPER	346W259010
013		6871R-0001J	PCB ASSY DPM1 JUNCTION DVD-CD R/RW	*ZZ001750R
014		5040R-0047A	RUBBER REAR(E2,5040H-1054A),YAMAUCHI	346W259020
016		4470R-0050A	GEAR ASSY FEED	304W058030
020		4470R-0073A	GEAR WHEEL TRAY	346W058010
021		4470R-0074A	GEAR TRAY	346W058020
022		6871R-3024C	PCB ASSY DPM1 TRAY	*ZZ001760R
023		4580R-0006A	ROLLER BASE TRAY	346W358010
024		4681R-0010C	MOTOR ASSY TRAY	*MM001120R
025		3040R-0032A	BASE TRAY (DPM1)	346W163010
026		3390R-0008A	TRAY DISC (DPM1)	346W163020
030		3040R-0031A	BASE MAIN (DPM1)	nsp
031		4470R-0069A	GEAR SLIDER	346W058030
032		4470R-0067A	GEAR MAIN	346W058040
033		4470R-0070A	GEAR EXCHANGE	346W058050
034		4470R-0068A	GEAR UP/DOWN	346W054010
035		4470R-0071A	GEAR LOADING	346W058060
036		4681R-0012A	MOTOR ASSY MAIN	*MM001130R
037		4470R-0072A	GEAR WHEEL MAIN	346W058070
038		6871R-3026B	PCB ASSY DPM1 MAIN-MODE	*ZZ001770R
413		4000R-0006A	SCREW TAPTITE 3x8(353-025B)	nsp
414		4000R-0006B	SCREW TAPTITE 3x8	nsp
416		4404R-0017A	SCREW TAPTITE	nsp
430		1SZZH-1003A	SCREW +D2.0 6MM SWRCH16A/NIY 4.5MM	nsp
432		1SZZR-0011A	SCREW MACHINE	nsp

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.